EY 20172020 TRANSPORTATION IMPROVEMENT PROGRAM

KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION Knoxville Regional Transportation Planning Organization

Fiscal Year 2017 – 2020 Transportation Improvement Program

Adopted by

The TPO Technical Committee on October 11, 2016

The TPO Executive Board on October 26, 2016

Phase 2 TIP Amended on April 26, 2017

KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION

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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.knoxtrans.org. Any person who believes he or she has been discriminated against should contact:

Knoxville Regional Transportation Planning Organization

Attention: Title VI Coordinator

400 Main Street, Suite 403

Knoxville, TN 37902

Telephone: (865) 215-2500

A RESOLUTION BY THE EXECUTIVE BOARD OF THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION ADOPTING THE FY 2017-2020 TRANSPORTATION IMPROVEMENT PROGRAM & AIR QUALITY CONFORMITY DETERMINATION

WHEREAS, in accordance with Federal requirements of the U.S. Department of Transportation, the elements of the transportation planning process are to receive final approval from the Executive Board of the local Metropolitan Planning Organization; and

WHEREAS, a TIP must be updated at least every four years; and

WHEREAS, no local highway and transit projects are eligible for Federal funds until they are programmed in the TIP; and

WHEREAS, an Air Quality Conformity Determination report was prepared to demonstrate that the implementation of the financially constrained FY 2017-2020 TIP conforms to the applicable air quality regulations of the Clean Air Act Amendments of 1990 and the FAST Act; and

WHEREAS, the Air Quality Conformity Determination report was provided to appropriate federal, state and local agencies for review and comment through a formal interagency consultation process; and

WHEREAS, this TIP comes from a conforming Long Range Transportation Plan; and

WHEREAS, notice of public availability of the proposed FY 2017-2020 TIP was published in the newspapers in the Knoxville Metropolitan Planning Area and public meetings for review and comment were held prior to finalizing the TIP; and

WHEREAS, the TIP and Air Quality Conformity Determination Report was made available for public comment for a period of thirty (30) days prior to consideration by the Board; and

WHEREAS, the FY 2017-2020 TIP has been prepared by participating agencies and the TPO Technical Committee recommends that this TIP be adopted by the Executive Board; and

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

That the requirements of the 23 CFR 450.324 (Transportation Improvement Program: General) are met and this resolution be adopted as an endorsement of the FY 2017-2020 Transportation Improvement Program.

October 26, 2016

Date

Mayor Madeline Rogero

City of Knoxville

TPO Executive Board Chair

Jeffres A. Welch

Director, Knoxville Regional TPO

METROPOLITAN TRANSPORTATION PLANNING PROCESS CERTIFICATION

In accordance with 23 CFR 450.334, the Knoxville Regional Transportation Planning Organization for the Knoxville Urbanized Area hereby certify every four years that the transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

- I. 23 U.S.C. 134, 49 U.S.C. Section 5303 (Highway and Transit);
- II. In non-attainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended 942 U.S.C 7504 and 7506 (c) and (d) and 40 CFR part 93;
- III. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C 2000d-1) and 49 CFR part 21;
- IV. 49 U.S.C. 5332, prohibiting discrimination, on the basis of race, color, creed, national origin, sex or age in employment or business opportunity;
- V. Section 1101 (b) of the FAST ACT (Pub. L. 114-357) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT (United States Department of Transportation) funded projects;
- VI. 23 CFR Part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
- VII. Provisions of the American with Disabilities Act of 1990 (42 U.S.C 12101 et.Seq) and 49 CFR parts 27, 37 and 38;
- VIII. The Older Americans Act, as amended (42 U.S.C 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
- IX. Section 324 of title 23 U.S.C regarding the prohibition of discrimination based on gender; and
- X. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

October 26, 2016

Date

Mayor Madeline Rogero

City of Knoxville

TPO Executive Board Chair

Jeffrev A. Welch

Director, Knoxville Regional TPO

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1.0 INTRODUCTION

1.1 Knoxville Regional Transportation Planning Organization Background

The Knoxville Regional Transportation Planning Organization (TPO) is the federally designated Metropolitan Planning Organization (MPO) required to carry out the transportation planning for the TPO Planning Area.

This area is based on the federally designated Knoxville Urbanized Area (UZA). The Knoxville UZA includes a number of jurisdictions, namely the City of Knoxville, Knox County, and parts of Anderson, Blount, Loudon, and Sevier Counties. Since 2000, the Knoxville Urbanized Area population grew 33 percent to 558,696 in 2010, while land area increased 29 percent to 437 square miles.

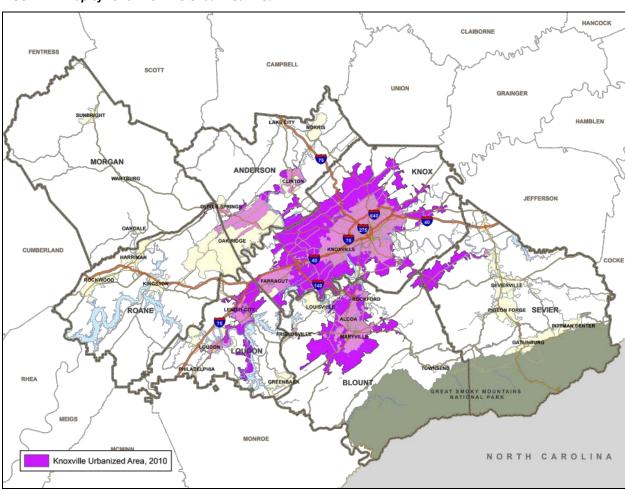


FIGURE 1 - Map of 2010 Knoxville Urbanized Area

The TPO Planning Area encompasses the existing Knoxville UZA, along with contiguous area expected to be urbanized within 20-years and had an estimated 2010 population of 657,109. The planning area determines what projects are included in the Transportation Improvement Program (TIP).

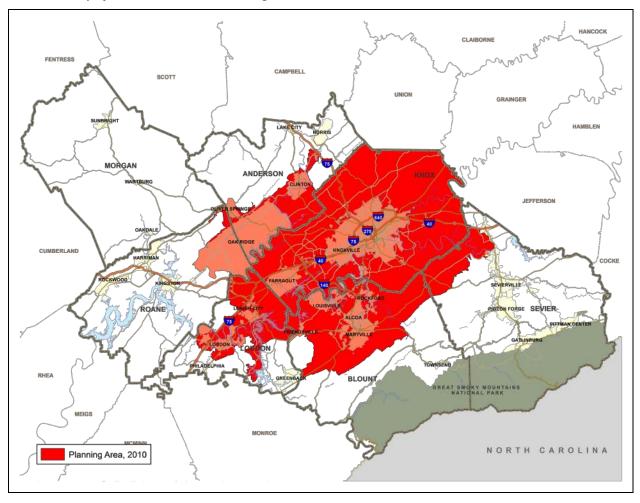


FIGURE 2 - Map of 2010 Knoxville TPO Planning Area

Within the planning area, the TPO complies with federal legislation requiring all transportation planning be conducted in accordance with the "3C" (Continuing, Cooperative, and Comprehensive) approach. One of the ways supporting the 3C process is through the development of a TIP. This is simply a list of projects and/or plans to accomplish within the planning area over a designated timeframe.

1.2 Federal Transportation Legislation and Regulations Overview

The transportation projects and programs in this TIP are primarily funded by federal sources and are subject to the regulations and policies from the legislation which allocates the funding. In December of 2015, the FAST Act (Fixing America's Surface Transportation Act) was signed into law and is the federal authorization act to fund surface

transportation programs, provide policies and a framework for investments to the country's transportation infrastructure. Specifically, Metropolitan TIPs are addressed in 23 USC Section 134, 23 CFR Part 450, 49 USC Section 5303, and 49 CFR Part 613 of the federal codes.

The FAST Act largely carries over policies from its predecessor known as "MAP-21" (Moving Ahead for Progress in the 21st Century Act) with only minor changes to the transportation planning process. One change is the addition of two planning factors for a new total of ten planning factors that the TPO must provide consideration of in its transportation plans. The TPO's Long Range Regional Mobility Plan 2040 addresses all of the FAST Act planning factors, which guide transportation planning and programming processes for all states and MPO's throughout the country. The ten planning factors are:

- 1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- 2. Increase the safety of the transportation system for motorized and non-motorized users.
- 3. Increase the security of the transportation system for motorized and non-motorized users.
- 4. Increase the accessibility and mobility of people and for freight.
- 5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- 6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- 7. Promote efficient system management and operation.
- 8. Emphasize the preservation of the existing transportation system.
- 9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- 10. Enhance travel and tourism

In addition to the ten planning factors, the FAST Act also continues the focus on seven "National Goal" areas and development of performance measures to track progress in meeting such. The seven national goals are as follows:

- 1. Safety –To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- 2. Infrastructure condition -To maintain the highway infrastructure asset system in a state of good repair.
- 3. Congestion reduction -To achieve a significant reduction in congestion on the National Highway System.
- 4. System reliability -To improve the efficiency of the surface transportation system.
- 5. Freight movement and economic vitality -To improve the National Highway Freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

- 6. Environmental sustainability -To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- 7. Reduced project delivery delays -To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

The FHWA published the Highway Safety Improvement Program and Safety Performance Management Measures (Safety PM) Final Rules in the Federal Register on March 15, 2016, with an effective date of April 14, 2016. The Tennessee Department of Transportation (TDOT) intends to establish statewide safety performance targets in 2017. Within six months of TDOT establishing safety performance targets, the TPO will either adopt TDOT's safety target or establish its own safety target.

After targets are established, the TIP will be updated to include an assessment of the anticipated effect of the overall program of projects on achieving the performance targets, including the safety targets per 23 U.S.C. 135(g)(4); 23 U.S.C.134(j)(2)(D).

The TPO's planning process is also consistent with the development of other federal and state plans and programs. Examples of these are the Knoxville Intelligent Transportation Systems (ITS) Architecture (developed in accordance with 23 CFR part 940) and the Knoxville Urban Area Incident Management Taskforce that explores new initiatives and seeks to increase incident management efficiency (in accordance with the Tennessee Strategic Highway Safety Plan 23 USC 148). Also, the TPO's principles and priorities are harmonized with TDOT's 25-Year Transportation Policy Plan. The TPO also recognizes the Federal Planning Emphasis Areas (PEA) in its plans, programs, and projects. The PEA's are integrated in the TPO's programs to ensure accountability, transparency, and equity. The PEAs for FY 2016 are:

- MAP-21 implementation transition to performance-based planning and programming
 Project Example: TIP No. 17-2014-232 Lenoir City ITS: Signal System Design project will design and implement an ITS signal system for 20 coordinated signals along US-321/SR-73 and US-11/SR-2. The system will enable data collection which will be used in future performance-based planning efforts.
- 2. Regional Models of cooperation
 - *Project Example*: TIP No. 17-2014-044 Knox/Blount Greenway Construction project will provide of an offroad trail that will connect to existing pedestrian and bicycle facilities on Alcoa Highway Bridge. This project requires continued cooperation between the two jurisdictions.
- 3. Ladders of opportunity / access to essential services
 - *Project Example*: TIP No. 17-2017-201 Section 5310 funds programs that serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act complementary paratransit services.

1.3 Transportation Improvement Program – An Overview

The Knoxville TPO is required to develop and regularly update the Transportation Improvement Program (TIP) in cooperation with the Tennessee Department of Transportation (TDOT) and any affected public transportation operators, which are the Knoxville Area Transit, Knox County Community Action Committee, and East Tennessee Human Resource Agency. The primary requirements of the TIP are:

- It shall cover a period of no less than four years, updated at least every four years, and approved by the MPO, Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Governor.
- It shall provide all interested parties with a reasonable opportunity to comment on the proposed TIP through formal public meeting and public review via electronic accessible formats such as the World Wide Web.
- It shall include capital and non-capital surface transportation projects for funding that are consistent with the adopted long-range transportation plan.
- It shall include a financial plan demonstrating how the projects in the plan can be fiscally implemented.
- It shall include all regionally significant projects.

This TIP covers the federal fiscal years (FY) 2017 – 2020 and is an update to the FY 2014 – 2017 TIP, which was adopted on October 16, 2013. The federal fiscal year runs from October 1st through September 30th. TDOT also develops a four-year plan called the Statewide Transportation Improvement Program (STIP) by working with Rural Planning Organizations (RPOs) and MPOs throughout the state. After approval by the TPO and the Governor, the TIP shall be included without change, directly or by reference, in the STIP. In nonattainment and maintenance areas, an air quality conformity demonstration finding on the TIP must be made by the FHWA and FTA in consultation with the Environmental Protection Agency (EPA) before it is included in the STIP.

1.4 Programming Policies

The TPO identified the following policies to provide guidance for the development and maintenance of the regional work program, and to assist in the effective administration of TPO-managed federal grant funds.

1. Delayed Project Policy: Project sponsors are given a one-year grace period to obligate funding for projects beyond the originally programmed year of work. If the delay is beyond the control of the project sponsor, TPO managed federal funds will not be removed from the project. If the delay is due to causes within the control of a sponsor, the TPO managed federal funds will be returned to the TPO general fund and re-programmed. Examples of delays that are considered within the control of a sponsor include: shifting priorities, insufficient local match, etc.

TPO staff will report on the obligation status of TPO managed federal funds projects quarterly to the Technical Committee and Executive Board. Project status information and updated phase of work cost estimates for these reports will be provided by project sponsors.

- 2. Draft Cost Overrun Policy: In cases where a community does not have sufficient funding to fulfill the scope of a project funded with TPO-managed federal grant funds, as originally programmed, the project sponsor may be granted the flexibility to shift funding across phases and/or years (pending the availability of funding) to cover increased cost estimates for the affected phases. At the discretion of the TPO staff, L-STBG funds (if available) may be programmed to cover the cost overrun of a project and the Technical Committee and Executive Board will be notified. Contractual agreements between TDOT and the project sponsor must not bind the TPO to pay for cost overruns with TPO-managed federal grant funds.
- **3. Draft New Projects Policy:** If a project sponsor requests that a new project be funded with TPO-managed federal grant funds after the initial Call for Projects, the project sponsor must submit a completed project application to TPO staff. If TPO staff recommend that the project be funded with TPO-managed federal grant funds, it must also be brought to the Technical Committee and Executive Board regardless if it falls within the category of an administrative adjustment per the *Definitions and Need for Amendments/Administrative Adjustments to the TIP/STIP Memorandum of Agreement* between FHWA, FTA, and TDOT.

2.0 TIP DEVELOPMENT

2.1 Process and FY 2017-2020 Timeline

The FY 2017-2020 TIP is being updated in two separate phases due to the need for alignment with the schedule for the update of the TPO's Mobility Plan 2040. The first phase of the FY 2017-2020 TIP was approved on January 6, 2017 and consisted only of a direct carry-over of projects from the previous FY 2014-2017 TIP that have phases of work which have not yet had funding obligated. The second phase of the FY 2017-2020 TIP is represented in this document and coincides directly with the adoption of the Mobility Plan 2040, which is the Long Range Transportation Plan for the Knoxville Region. This document contains new projects or project changes that result from the Mobility Plan 2040 update will be incorporated into the FY 2017-2020 TIP and are updated via an amendment. Both the Mobility Plan and FY 2017-2020 TIP will be adopted simultaneously on April 26,2017. This two-phase TIP update process ensures that the TIP is consistent and includes a direct subset of projects from the Long Range Transportation Plan at all times as is required by federal regulations. The April 26, 2017 Executive Board resolution is in Appendix G and outlines all the changes between the two TIP phases.

The following is a timeline for Phase 1 of the 2017-2020 TIP development process:

Technical Committee reviews carry-over projects May - July 2016

TDOT Review (30 business days)

June 13 – July 25, 2016

FHWA Review (20 business days)

August 8 – September 7, 2016

Formal Public Comment Period (30 calendar days) September 16 – October 16, 2016

Public Meetings July/August/September 2016

Technical Committee final recommendation October 11, 2016

Executive Board adoption October 26, 2016

The following is a timeline for Phase 2 of the 2017-2020 TIP development process which will be treated as a TIP amendment:

Technical Committee reviews new projects and project changes February 2017

Formal Public Comment Period March 27 – April 10, 2017

TDOT Review April 11, 2017

Technical Committee final recommendation April 11, 2017

Executive Board adoption April 25, 2017

2.2 TPO Project Selection Process

The Knoxville TPO is responsible for selecting and programming projects with Local Surface Transportation Block Grant Program (L-STBG) (formerly the Local Surface Transportation Program (L-STP)), STBG Transportation Alternatives (STBG-TA), Section 5307 Urbanized Area, Section 5310 Mobility of Seniors and Disabilities, Section 5339 Bus and Bus Facilities, and Congestion Mitigation and Air Quality Improvement (CMAQ) funds.

2.2.1 SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBG) FUNDS

The FAST Act amended the Surface Transportation Program (STP) contained in 23 U.S.C. 133, and changed the program name to the "Surface Transportation Block Grant Program".

For L-STBG funds, the criteria for projects included:

- Is the project in the current FY 2014-2017 TIP
- Is the project included in the 2040 Mobility Plan
- Is a Knoxville Regional TPO member a sponsor and financially committed to the project

The TPO developed an application for local jurisdictions to submit projects for L-STBG funds (see Appendix B for application). Phase 1 FY 2017-2020 TIP consists only of carry-over projects with L-STBG funds from the previous FY 2014-2017 TIP, a new formal call for projects and project selection process was not conducted. The Phase 2 FY 2017-2020 TIP call for projects is combined with the 2040 Mobility Plan update call for projects which was conducted from March 28 – May 2, 2016.

The following is a summary of the project selection process that was used for the 2040 Mobility Plan update and Phase 2 FY 2017-2020 TIP:

Selection criteria and scoring system were established with feedback from the public, Mobility Advisory Committee, and TPO Technical Committee (see Mobility Plan 2040 for more details). All projects were scored using the selection criteria. Quantitative data was used whenever available to eliminate subjectivity. For the first time, projects that are considered within community (i.e. smaller in scale) were scored differently than community to region projects (i.e. larger projects).

- Within community projects support local, multimodal connections and access to community resources within a variety of centers, from large urban to rural crossroads.
 - Examples: intersection improvements, streetscaping projects, sidewalks, and short sections of greenways.
- Community to region projects support strategic, multimodal connections between community centers and regional economic centers.
 - o Examples: major roadway projects, long corridor projects, regional greenways, and regional transit

The scoring criterion were established to mirror the Mobility Plan 2040 Goals. The following are brief descriptions of each scoring criterion and how points were generally assigned:

Table 1 Mobility Plan Selection Criteria and Point System

GOAL	SCORING DESCRIPTION	COMMUNITY TO REGION POINTS	WITHIN COMMUNITY POINTS
Goal 1: Maintenance & Efficiency	Roughly two-thirds of points were awarded based on whether the project improved the efficiency of an existing roadway rather than new construction, maximum points were awarded for projects that minimized environmental impacts. Therefore, a simple resurfacing project would receive more points than a major roadway widening project. The other one-third of points were based on the roadway functional classification to give more weight to projects that are on roadways of more regional significance	19	19
Goal 2: More Options	Points were awarded based on the inclusion of transit accommodation, sidewalks, bike lanes, and/or greenway trails within the project. This was combined with the level of population and employment density calculated with the "Preservation of Places" goal to assess the level of connectivity between major origins and destinations. Projects with additional lanes were given slightly fewer points than a comparable minor reconstruction project because of increases in vehicle speeds and crossing distance which degrade safety for people walking and bicycling.	17	18
Goal 3: Safety & Security	The majority of points were awarded based on existing crash rates on a scale developed by a percentile ranking process relative to all projects. If a project was on a new route it was given only the minimum points possible unless it could be specifically tied to a parallel route that was being bypassed and its crash rate. Additional points were awarded if accommodations for alternative modes were provided. Security/emergency response points were based on the functional class of the roadway.	13	16
Goal 4: Health & Environment	The majority of points for this category were based on a clear demonstration of the project promoting active transportation and whether stormwater mitigation was addressed. A small number of points were also given based on a subjective assessment of the project's potential impact on idling reduction to reduce air pollution.	10	13
Goal 5: Equitable Access	Points were awarded based on project location relative to the Priority Population status (Moderate, High or Very High).	9	13
Goal 6: Congestion Reduction	The Knoxville Regional Travel Demand Model was used to determine the roadway's current volume-to-capacity ratio that would be affected by the project and a portion of the points in this category were assigned based on that relative congestion level. The other portion of points in this category were assigned based on the type of project and whether it specifically targeted congestion reduction, as opposed to having a safety or economic development emphasis. Additionally, maximum points were given to project types that would address congestion through demand management or operations. The TPO's Congestion Management Process (CMP) as required under federal transportation planning regulations. The CMP is documented in the Mobility Plan 2040 and a specific set of congested corridors were identified in Appendix H of that plan and provided to the jurisdictions as part of the TIP project application process. Projects that address congested corridors and the goals of the CMP were given additional weighting under the Congestion Reduction criterion.	12	8

GOAL	SCORING DESCRIPTION	COMMUNITY TO REGION POINTS	WITHIN COMMUNITY POINTS
Goal 7: Preservation of Places	A geographic analysis was performed to determine the existing population and employment density within the immediate area around each project and a relative scale was developed to convert this measure to appropriate points. This measure was used to determine whether the project was located in a more established area rather than spreading out to undeveloped locations.	11	9
Goal 8 Economy & Freight	Points were awarded based on the amount of employment within one mile of project location and relative percentile ranking. The percent of truck traffic was also used to assign points specifically for projects submitted in the Community to Region category.	9	4

2.2.2 SURFACE TRANSPORTATION BLOCK GRANT PROGRAM — TRANSPORTATION ALTERNATIVES (STBG-TA) FUNDS

The FAST Act eliminated the MAP-21 Transportation Alternatives Program (TAP) and replaced it with a set-aside of Surface Transportation Block Grant program funding for transportation alternatives (STBG-TA). This program provides funding for programs and projects defined as transportation alternatives, including on-and off-road pedestrian and bicycle facilities; infrastructure projects for improving non-driver access to public transportation and enhanced mobility; community improvement activities; environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.

For STBG-TA funds, the TPO again provided a project application and related materials to all jurisdictions within the Knoxville TPO Planning Area and on the TPO's website to download. The project application is in Appendix H.

Completed applications were ranked in a competitive process based on the following criteria: Improving Active Transportation Choices, Serving Priority Populations, Improving Access to Transit, Implementing Plans, Creating Regional Connections, and Stretching Funding Further.

2.2.3 SECTION 5307, 5310, AND 5339 TRANSIT FUNDS

With expansion of the Knoxville Urbanized Area in 2010 and consolidation of transit grant funds under MAP-21, the Knoxville TPO now has multiple transit providers applying for federal transit funds. The TPO, designated recipient for 5310 funds, developed a "call-for-projects" application process where TPO staff and members of the Technical Committee evaluated applications. The City of Knoxville, designated recipient for 5307 and 5339 funds, requested the TPO manage a project selection process. Once that process is complete, specific projects will be identified and added to the TIP. This annual process ensures transit projects do not exceed the apportioned levels of funding each fiscal year for the TPO area. The project applications and criteria are in Appendix B.

2.2.4 CONGESTION MITIGATION AND AIR QUALITY (CMAQ) FUNDS

CMAQ funds are controlled by TDOT through a "call-for-projects" application process. When made available from the state, the TPO will issue a "call-for-projects" to the local Planning Area for projects and programs that help to achieve and maintain federal air quality health standards. Seven criteria were used evaluate each project based on Emission Reductions, Cost Effectiveness of Emission Reductions, Projects that Address Congressional CMAQ Priorities, Innovative Project Proposals, Project Impact on Diversity and Comprehensiveness of Regional Initiatives, Projects Benefits for Multimodal Infrastructure in Region, and Quality of Implementation Plan and Management Plan.

2.3 State Sponsored Projects

The TDOT submitted to the Knoxville TPO a list of projects funded by the various federal and state funding sources, including projects on the National Highway System. These projects are consistent with the Mobility Plan 2040, the STIP, TDOT's 25-Year Transportation Policy Plan, and the jurisdictions' transportation plans. The various funding sources include National Highway Performance Program (NHPP), High Priority Project (HPP), Surface Transportation Block Grant Program (STBG), and Highway Safety Improvement Program (HSIP).

2.4 Title VI and Environmental Justice

The TPO is responsible for ensuring that transportation policies, programs, and projects in the urban area do not have an adverse effect, especially on those persons protected under Title VI of the 1964 Civil Rights Act and the Environmental Justice laws established under Executive Order 12898 in 1994.

There are 160 projects in the Knoxville Regional Mobility Plan with a total cost of \$4.4 billion. Of that total, 59 projects are located within or directly adjacent to Title VI designated areas for a total cost of \$1.5 billion or 34.3 percent.

For local project evaluation, applicants are required to complete Section 4 regarding Mobility Options on the TIP application. Two questions in this section are: 1). Describe how the project provides transportation services to individuals or groups who need some form of transportation due to inability to utilize other forms of transportation; this can include service to the elderly, disabled, or economically disadvantaged individuals; and 2). Briefly describe the project's potential advantages or disadvantages toward minorities.

Projects in the TIP are required to be in the Mobility Plan or consistent with the principles and strategies. This includes ensuring that improvements are planned and benefit those living in designated Title VI areas.

3.0 PUBLIC INVOLVEMENT

3.1 Public Involvement Process

The public involvement process for the FY 2017-2020 TIP is in accordance with policies and procedures outlined in the TPO's The Outreach Plan for public participation.

The TPO sends out notice of the draft TIP document public comment period and public meetings to neighborhood organizations, special interest groups like the Bike Walk Knoxville, Technical Committee members, Executive Board members, and agencies responsible for natural resources, land use management, environmental protection, conservation, airport operations, and historic preservation. The TPO consulted wpith the above agencies during the development of the plan. Notices are published in all the local and major newspapers throughout the six-county area, on the TPO's website and through the agency's Facebook page. Draft versions of the TIP document will be available on the TPO's website (http://www.knoxtrans.org/index.htm) for public comment. All public comments received are listed in appendix A.

The TPO discussed the FY 2017-2020 TIP at Technical Committee meetings and Executive Board meetings from June through September. All meetings were advertised in the local papers and on the TPO's website. At these meetings, citizens were able to make comments and raise concerns or questions during any phase of the process.

3.2 Public Involvement for Federal Transit Administration Section 5307 & 5339 Funds

The City of Knoxville is the designated recipient of FTA Section 5307 and 5339 funds. A Program of Projects (POP) is a list or program of projects utilizing FTA funds. As per the FTA Circular 9030.1D, the public participation requirements for the TIP may be used in lieu of a local process when developing the POP. The first year of an approved TIP constitutes a list of "agreed to" projects for FTA purposes. The public participation process for the TIP satisfies the FTA requirements for developing a POP. To make it clear to the public, the public notice for the POP will state the TIP process is being used and it satisfies the FTA public involvement requirements for developing a POP.

3.3 Public Meeting Dates

The following are formal public meeting dates based on the timeline for TIP completion. The public will be able to provide comments or concerns at any of these meetings regarding draft versions of the FY 2017-2020 TIP:

- **Draft TIP** June 14, 2016, at 9:00 a.m. at the Technical Committee meeting in the City County Building in downtown Knoxville; and
- **Draft TIP** June 22, 2016, at 9:00 a.m. at the Executive Board meeting in the City County Building in downtown Knoxville; and

- Revised draft TIP August 9, 2016, at 9:00 a.m. at the Technical Committee meeting in the City County Building in downtown Knoxville; and
- Revised draft TIP August 24, 2016, at 9:00 a.m. at the Executive Board meeting in the City County Building in downtown Knoxville; and
- TIP approval recommendation October 11, 2016, at 9:00 a.m. at the Technical Committee meeting in the City County Building in downtown Knoxville; and
- TIP approval October 26, 2016, at 9:00 a.m. at the Executive Board meeting in the City County Building in downtown Knoxville; and
- Phase 2 Draft TIP Project List Review February 14, 2017 at 9:00am at the Technical Committee meeting in the City County Building in downtown Knoxville; and
- Phase 2 Draft TIP Project List Review February 22, 2017 at 9:00am at the Executive Board meeting in the City County Building in downtown Knoxville; and
- Phase 2 TIP amendment approval recommendation April 11, 2017 at 9:00am at the Technical Committee meeting in the City County Building in downtown Knoxville; and
- Phase 2 TIP amendment approval recommendation April 26, 2017 at 9:00am at the Executive Board meeting in the City County Building in downtown Knoxville.

4.0 AIR QUALITY 4.1 Air Quality Summary

The Clean Air Act requires the United States Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six "Criteria Pollutants" — Particulate Matter, Ozone, Nitrogen Dioxide, Carbon Monoxide, Sulfur Dioxide, and Lead in order to protect human health and the environment from unsafe levels of these pollutants. These pollutants are regulated through the EPA setting maximum limits on exposure levels that are reviewed periodically based on current science and health studies. Regions which are found to be out of compliance with those limits based on actual measurements of pollution at monitoring sites may be designated by EPA as a "Nonattainment Area."

The Knoxville Region (Blount, Knox and a portion of Anderson counties) was designated as Nonattainment for the 2008 Ozone Standard on July 20, 2012. The EPA approved a re-designation of the area to Attainment with a Maintenance Plan effective on August 12, 2015.

On April 5, 2005, the EPA formally designated the counties of Anderson, Blount, Knox, Loudon, and a portion of Roane in non-attainment for the 1997 Annual PM2.5 Standard. In 2006, EPA strengthened the PM2.5 standard by reducing the permissible daily levels of PM2.5 and the same counties were formally designated non-attainment for the 2006 Daily PM2.5 Standard effective December 2009.

4.2 Air Quality Conformity

As an Air Quality Nonattainment/Maintenance Area, the Knoxville TPO must demonstrate that its transportation plans and programs will meet air quality conformity requirements — a process known as "Transportation Conformity." This ensures that federal funds will not be spent on projects that cause or contribute to any new violations of the Nation Ambient Air Quality Standards (NAAQS); increase the frequency or severity of NAAQS violations; or delay timely attainments of the NAAQS or any required interim milestone. However, due to the non-attainment status, the non-attainment area is eligible to receive Congestion Mitigation Air Quality Improvement Program funding from the Federal Highway Administration, at the discretion of the TDOT.

Transportation conformity is demonstrated through a process known as a regional emissions analysis that is used to demonstrate that the implementation of the proposed transportation projects will not exceed the required levels of emissions determined for attainment by the State Implementation Plan for the applicable air quality standard. The federal regulations addressing Transportation Conformity are found in 40 CFR Parts 51 and 93, and are also known as the "conformity rule". The TPO conducted a regional emissions analysis and conformity finding for the overall update of the 2040 Mobility Plan that is documented separately in the report titled "Air Quality Conformity Determination for the Mobility Plan 2040 and FY 2017-2020 Transportation Improvement Program". Since the FY 2017-2020 TIP projects are a direct subset of the 2040 Mobility Plan the conformity determination is applicable to both plans and conformity of the TIP is therefore also demonstrated.

The development of the TIP and conformity determination was coordinated with stakeholder and regulatory agencies through an Interagency Consultation (IAC) process as required by 40 CFR 93.105. Any comments related to the TIP and conformity determination during the IAC consultation are listed in the separate Transportation Conformity Determination Report.

Since the program meets conformity regulations of the EPA and the USDOT under 40 CFR Part 93, and approved by appropriate agencies, the TIP is conforming. Currently there are no transportation control measures (TCMs) in the Tennessee SIP for the Knoxville 8-hour ozone and PM2.5 nonattainment areas. However, should TCMs be introduced in the area, nothing in the TIP will prohibit the timely implementation of any that are approved in the SIP for the Knoxville area.

5.0 FINANCIAL PLAN

5.1 Financial Summary

A financial plan is required to demonstrate how projects in the TIP can be implemented over the life of the program. TDOT, local jurisdictions, transit operators, and other agencies with projects in the TIP have indicated that they have the financial resources available to provide the necessary matching funds to complete their projects. The following tables provide additional information regarding a list of federal transportation funding programs and a summary that programmed expenditures are less than or equal to all fund allocations making the TIP financially constrained.

5.2 Funding Sources

Table 2 provides a list of federal funding sources under the current legislation (FAST Act) and the required match for projects in the FY 2017-2020 TIP. Certain safety projects and CMAQ projects that include an air quality or congestion relief component are eligible for 100 percent Federal funding.

TABLE 2 - Federal Funding Under FAST Act

FUNDING PROGRAM	ABBREVIATION	SOURCE	FUNDING SHARE
Surface Transportation Block Grant Program - State	STBG	FHWA	80% Federal, 20% Match
Surface Transportation Block Grant Program - Local	L-STBG	FHWA	80% Federal, 20% Match
Congestion Mitigation and Air Quality Improvement Program	CMAQ	FHWA	80% Federal, 20% Match
National Highway Performance Program	NHPP	FHWA	80% Federal, 20% Match
Highway Safety Improvement Program	HSIP	FHWA	90% Federal, 10% Match
National Highway Freight Program	NHFP	FHWA	90% Federal, 10% State or 80% Federal, 20% State
Federal Lands Access Program	FLAP	FHWA	100% Federal or 80% Federal, 20% State
Federal Lands Transportation Program	FLTP	FHWA	100% Federal, 0% Match
Emergency Relief Program	ERP	FHWA	80% Federal, 20% Match
Section 5307 Urbanized Area Formula – Capital Assistance	5307	FTA	80% Federal, 10% State, 10% Local
Section 5307 Urbanized Area Formula – Operating Assistance	5307	FTA	50% Federal, 25% State, 25% Local

Section 5310 Mobility of Seniors and Disabilities – Capital Assistance	5310	FTA	80% Federal, 10% State, 10% Local
Section 5310 Mobility of Seniors and Disabilities – Capital Assistance	5310	FTA	50% Federal, 25% State, 25% Local
Section 5339 Bus and Bus Facilities	5339	FTA	80% Federal, 10% State, 10% Local

Some federal funding sources have been subject to change over time as different transportation bills are enacted. Table 3 lists federal funds that were carried over from previous transportation bills.

TABLE 3 - Carryover Federal Funding Under Previous Transportation Bills

FUNDING PROGRAM	ABBREVIATION	SOURCE	FUNDING SHARE
Transportation Alternatives Program	TAP	FHWA	80% Federal, 20% Match
Transportation Enhancement	EN	FHWA	80% Federal, 20% Match
High Priority Project	HPP	FHWA	80% Federal, 20% Match

In addition to federal funded projects, projects of regional significance that rely on 100% state or local funding sources are also in included in the TIP. Table 4 lists the current state funded programs available through TDOT.

TABLE 4 - State Funded Programs

FUNDING PROGRAM	ABBREVIATION	SOURCE	FUNDING SHARE
Local Interstate Connector	LIC	TDOT	50% State, 50% Local Match
State Industrial Access Road	SIA	TDOT	100% State, 0% Local Match (Construction) 50% State, 50% Local Match (ROW)
Interchange Lighting	IL	TDOT	50% State, 50% Local Match
Multimodal Access Grant	STA	TDOT	95% State, 5% Local Match

5.3 Advance Construction

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

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

5.4 Revenues and Expenditures

In the Budget Worksheet section of the TIP application, jurisdictions were asked to accurately account for project inflation costs by using a 1.25 percent inflation rate for each year (2017-2020) based on the 2040 Mobility Plan. Although the TPO provided an inflation rate to jurisdictions, project costs were left to the judgment of the sponsoring agency due to primary project knowledge and the variety of inflationary pressures by project type and schedule. Table 5 is a summary of expenditures for all projects in the FY 2017-2020 TIP by funding source and fiscal year. All revenues and expenditures reflect year of expenditure dollars.

TABLE 5 - Knoxville Regional TPO Summary of Programmed Expenditures - FY 2017-2020

FUNDING SOURCE	FY 2017	FY 2018	FY 2019	FY 2020	TOTAL	SHARE (%)
ACPHSIP	\$900,000	\$0	\$0	\$0	\$900,000	0.16
CMAQ	\$19,703,361	\$1,802,983	\$8,255,000	\$169,000	\$29,930,344	5.45
EN	\$1,451,975	\$0	\$0	\$0	\$1,451,975	0.26
HPP	\$4,374,375	\$0	\$10,090,162	\$0	\$14,464,537	2.64
HSIP	\$4,585,888	\$3,467,360	\$3,467,360	\$3,467,360	\$14,987,968	2.73
LIC	\$602,500	\$0	\$0	\$0	\$602,500	0.11
LOCAL	\$36,500,000	\$8,000,000	\$0	\$0	\$44,500,000	8.11
L-STBG	\$51,046,277	\$16,969,257	\$13,393,644	\$14,253,870	\$95,663,048	17.43
L-STBG-TA	\$3,871,098	\$954,148	\$955,985	\$955,985	\$6,737,216	1.23
NHPP	123,030,884	\$90,476,577	\$6,676,577	\$43,976,577	\$264,160,615	48.14
PHSIP	\$1,101,500	\$601,500	\$601,500	\$601,500	\$2,906,000	0.53
RPHSIP	\$1,920,000	\$0	\$0	\$0	\$1,920,000	0.35
SECTION 5307	\$8,468,145	\$8,592,575	\$8,592,575	\$8,592,575	\$34,245,870	6.24
SECTION 5310	\$1,055,389	\$805,389	\$805,389	\$805,389	\$3,471,556	0.63
SECTION 5339	\$762,616	\$762,616	\$762,616	\$762,616	\$3,050,464	0.56
S-STBG	\$15,696,196	\$3,399,521	\$3,399,521	\$3,399,521	\$25,894,759	4.72
S-STBG-TA	\$3,058,416	\$0	\$0	\$0	\$3,058,416	0.56
STA	\$762,500	\$0	\$0	\$0	\$762,500	0.14

Total	278,891,120	135,831,926	\$57,000,329	\$76,984,393	\$548,707,768	100.00
Federal	\$193,902,499	\$102,000,199	\$46,885,239	\$61,255,291	\$404,043,228	73.64
State	\$32,054,806	\$21,724,618	\$5,842,650	\$12,284,618	\$71,906,692	13.10
Local	\$52,933,815	\$12,107,109	\$4,272,440	\$3,444,484	\$72,757,848	13.26
Other	\$0	\$0	\$0	\$0	\$0	0.00

Note: Fiscal Year totals for each funding source reflect federal, state, and local match combined. L-STBG Fed. Balance is the balance of unprogrammed L-STBG funds each fiscal year.

Table 6 is a summary of revenues for all projects in the TIP by funding source and fiscal year. Revenues for TDOT-managed federal funds (e.g., HPP, NHPP, STP, etc.) are provided by TDOT and equal to the programmed amount for the same period in the expenditures table above. TPO-managed federal funds (L-STBG, STBG-TA, Section 5307, 5310, 5339, and CMAQ) are programmed annually in the TIP according to FY 2016 apportionments for each respective fund along with any unobligated balance from previous fiscal years. An inflation rate of 4% per year was used on TPO-allocated federal revenues (L-STBG and STBG-TA) based on the expected increases over the life of the FAST Act. TPO expenditures in the table above do not exceed the revenues for the same period in the table below.

TABLE 6 - Knoxville Regional TPO Summary of Total Revenues - FY 2017-2020

FUNDING SOURCE	FY 2017	FY 2018	FY 2019	FY 2020	TOTAL	SHARE (%)
ACPHSIP	\$900,000	\$0	\$0	\$0	\$900,000	0.16
CMAQ	\$19,703,361	\$1,802,983	\$8,255,000	\$169,000	\$29,930,344	5.45
EN	\$1,451,975	\$0	\$0	\$0	\$1,451,975	0.26
HPP	\$4,374,375	\$0	\$10,090,162	\$0	\$14,464,537	2.64
HSIP	\$4,585,888	\$3,467,360	\$3,467,360	\$3,467,360	\$14,987,968	2.73
LIC	\$602,500	\$0	\$0	\$0	\$602,500	0.11
LOCAL	\$36,500,000	\$8,000,000	\$0	\$0	\$44,500,000	8.11
L-STBG	\$51,046,277	\$16,969,257	\$13,393,644	\$14,253,870	\$95,663,048	17.43
L-STBG-TA	\$3,871,098	\$954,148	\$955,985	\$955,985	\$6,737,216	1.23
NHPP	123,030,884	\$90,476,577	\$6,676,577	\$43,976,577	\$264,160,615	48.14
PHSIP	\$1,101,500	\$601,500	\$601,500	\$601,500	\$2,906,000	0.53
RPHSIP	\$1,920,000	\$0	\$0	\$0	\$1,920,000	0.35
SECTION 5307	\$8,468,145	\$8,592,575	\$8,592,575	\$8,592,575	\$34,245,870	6.24
SECTION 5310	\$1,055,389	\$805,389	\$805,389	\$805,389	\$3,471,556	0.63

SECTION 5339	\$762,616	\$762,616	\$762,616	\$762,616	\$3,050,464	0.56
S-STBG	\$15,696,196	\$3,399,521	\$3,399,521	\$3,399,521	\$25,894,759	4.72
S-STBG-TA	\$3,058,416	\$0	\$0	\$0	\$3,058,416	0.56
STA	\$762,500	\$0	\$0	\$0	\$762,500	0.14
Total	278,891,120	135,831,926	\$57,000,329	\$76,984,393	\$548,707,768	100.00
Federal	\$193,902,499	\$102,000,199	\$46,885,239	\$61,255,291	\$404,043,228	73.64
State	\$32,054,806	\$21,724,618	\$5,842,650	\$12,284,618	\$71,906,692	13.10
Local	\$52,933,815	\$12,107,109	\$4,272,440	\$3,444,484	\$72,757,848	13.26
Other	\$0	\$0	\$0	\$0	\$0	0.00

Notes: Fiscal Year totals for each funding source reflect federal, state, and local match combined. L-STBG Fed. Balance is the balance of unprogrammed L-STBG funds each fiscal year.

In 2017, the annual allocation of L-STBG funds to the TPO Planning Area from TDOT was \$10,334,493. This is the allocation plus 4% per year increase that was applied to each fiscal year of the FY 2017-2020 TIP. As a result, Table 7 provides a summary of L-STBG funds for the four-years of the TIP. For purposes of this draft TIP, the starting L-STBG balance was determined to be \$39,697,101 as of 10/1/2016. Beginning with the opening balance, each subsequent year (FY 2017-2020) adds the annual allocation, plus any balance carry over and then subtracts out the programmed project expenditures. The remaining balance of L-STBG funds each year is financially constrained.

TABLE 7 - FY 2017-2020 Local Surface Transportation Block Grant (L-STBG) Revenues and Expenditures

LOCAL SURFACE TRANSPORTATION BLOCK GRANT PROGRAM FUNDS	OPENING BALANCE	FY 2017 ALLOCATION	FY 2018 ALLOCATION	FY 2019 ALLOCATION	FY 2020 ALLOCATION
Annual Allocation		\$10,334,493	\$10,747,873	\$11,177,788	\$11,624,899
Allocation + Balance Carry Over	\$37,697,101	\$48,031,594	\$15,259,674	\$12,766,838	\$13,612,823
Expenditures		\$43,519,793	\$13,670,623	\$10,778,914	\$11,403,096
Balance		\$4,511,801	\$1,589,051	\$1,987,924	\$2,209,727

Note: The FY 2016 federal allocation of L-STBG funds was \$9,954,081.

Concerning transit funds, FTA's allocation to the TPO in 2016 for Section 5307 was \$6,204,025, Section 5310 was \$541,437, and Section 5339 was \$610,092. Again, the 2016 allocation for each transit fund was applied to the fiscal years of the FY 2017-2020 TIP (see Table 8) with no inflation rate used. A placeholder project for each of the three transit funds is in the TIP and amended each fiscal year according to the amount apportioned to the Knoxville area for each respective fund. Once the subsequent call for projects is complete, the awarded local transit projects are amended in the TIP.

TABLE 8 - Fiscal Year 2017 - 2020 FTA Transit Funds Revenues

FTA TRANSIT FUNDS	FY 2017 ALLOCATION	FY 2018 ALLOCATION	FY 2019 ALLOCATION	FY 2020 ALLOCATION
SECTION 5307 – Urbanized Area Formula Grant	\$6,204,025	\$6,204,025	\$6,204,025	\$6,204,025
SECTION 5310 – Mobility of Seniors and Disabilities	\$541,437	\$541,437	\$541,437	\$541,437
SECTION 5339 – Bus and Bus Facilities Program	\$610,092	\$610,092	\$610,092	\$610,092

Notes: The FY 2016 allocation of Section 5307 funds to the Knoxville TPO was \$6,204,025. The FY 2016 allocation of Section 5310 funds to the Knoxville TPO was \$541,437. The FY 2016 allocation of Section 5339 funds to the Knoxville TPO was \$610,092.

5.5 Operations and Maintenance

Along with new transportation projects, operating and maintaining the transportation system is an important aspect in ensuring that investments to improve, widen, or expand the existing transportation system are maintained. If new improvements or existing roadways are not maintained properly, then the transportation system is not functioning at its capacity and the new investments are not fully realized.

Operations and maintenance costs can include paving or repaving, signs and repainting, right of way maintenance, traffic signal maintenance, surveillance and inspection, street lighting, minor sidewalk improvements, etc. Table 9 is a list of FY 2010/2011 annual operations and maintenance cost from the jurisdictions in the TPO Planning Area, along with the major transit provider Knoxville Area Transit.

TABLE 9 - TPO Planning Area Annual Operations and Maintenance Costs

JURISDICTION	ANNUAL O&M COSTS (FY 2015)	FEDERAL AID ROADWAY MILEAGE (LANE MILES)
Anderson County*	\$1,728,000	49.3
City of Clinton	\$420,000	20.9
City of Oak Ridge	\$1,721,000	105.8
Blount County*	\$4,430,000	229.2
City of Alcoa	\$232,000	76.0
City of Maryville	\$458,000	67.7
Knox County	\$3,825,000	500.4
Town of Farragut	\$608,000	50.7
City of Knoxville	\$11,300,000	434.0

JURISDICTION	ANNUAL O&M COSTS (FY 2015)	FEDERAL AID ROADWAY MILEAGE (LANE MILES)
Loudon County*	\$736,000	106.3
Lenoir City	\$267,000	43.7
City of Loudon	\$167,000	23.8
Sevier County*	\$7,867,000	38.6
TDOT**	\$6,500,000	1,833.0
Knoxville Area Transit (KAT)	\$4,774,000	N/A
Total TPO Planning Area	\$45,033,000	3,579.4

^{*} TPO Planning Area does not include entire county - O&M costs are for full county, lane miles represent TPO Planning Area

^{**} TDOT's O&M costs include only the portion specifically for roadway resurfacing

6.0 AMENDMENTS AND ADJUSTMENTS

The TPO will follow the TIP amendment/adjustment policy outlined by TDOT/FHWA/FTA. A summary of when the TPO will amend or adjust the TIP is as follows:

6.1 Amendments

An amendment is a major change in the approved TIP. It is defined as follows:

• A major change in the total project cost (excluding groupings); or

TABLE 10 - Amendment/Adjustment Cost Thresholds

Total project cost of all phases shown within the approved TIP	Amendment	Administrative Adjustment
Up to \$2 million	≥ 75%	< 75%
\$2 million to \$15 million	≥ 50%	< 50%
\$15 million to \$75 million	≥ 40%	< 40%
\$75 million and above	≥ 30%	< 30%

Source: TDOT and FHWA MOU

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

The TIP may be amended at any time, but amendments require federal approval and redetermination of TIP fiscal constraint and air quality conformity, where applicable. TDOT will review each amendment and submit the amendment to the appropriate Federal Agency. The federal agencies will review and respond to a formal written request for amendment approval from TDOT within 10 business days of receipt.

6.2 Adjustments

An adjustment is a minor change from the approved TIP. It is defined as follows:

- A minor change in the total project cost (see total project cost table above); or
- A minor change in project description that does not change the air quality conformity finding in maintenance and/or non-attainment areas; or
- A minor change in the project description/termini that is for clarification and does not change the project scope; or

- Shifting funds between projects within a TIP (i.e., funding sources and projects already identified in the TIP) if the change does not result in a cost increase greater that the amendment threshold (see project total cost table) for the total project cost of all phases shown within the approved TIP; or
- Adding an amount of funds already identified in the STIP/TIP for the current or previous year(s) if the funds are currently identified in the STIP/TIP either in an existing project or as available funds and the change does not result in a cost increase greater than the amendment threshold (see project total cost table) for the total project cost of all phases within the approved TIP; or
- Moving projects from year to year within an approved TIP, except those that cross air quality horizon years;
 or
- Changes required to follow FHWA and FTA instructions as to the withdrawal of funds or reestablishment of funds withdrawn at the request of FHWA or FTA; or
- Moving funds between similarly labeled groupings, regardless of percent change; or
- Adjustments in revenue to match actual revenue receipts.

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

6.3 Project Groupings

The use of project groupings is permitted under 23 CFR 450.326 (h) for projects in the TPO's TIP. Projects that are funded by such groupings are to be of a scale small enough not to warrant individual identification and may be grouped by function, work type, and/or geographic area using the applicable classifications under 23 CFR 771.117 (c) and (d) and/or 40 CFR part 93. Project groupings may only include projects that meet the following conditions: non-regionally significant, environmentally neutral, and exempt from air quality conformity.

Both the TPO and TDOT utilize groupings to program funds to transportation projects. The TPO manages groupings for Transportation Alternatives (L-STBGA-TA) funded projects, bike and pedestrian projects, planning reports and studies, and maintenance and repair projects that comply with 23 CFR 450.326(h). Descriptions of TPO managed groupings can be found on the project pages. Appendix E includes descriptions of TDOT's statewide groupings.

6.4 TPO Amendment/Adjustment Overview

Once TPO staff receives a request for TIP amendment/adjustment from a local jurisdiction or TDOT, staff determines if the change is an amendment or adjustment. If an amendment, the TPO will advertise the TIP change in the local papers for comment at the Technical Committee meeting. The comment period for an amendment is a minimum 14 days. The Interagency Consultation reviews the amendment for air conformity determination. After the Technical Committee recommends approval of the amendment, it is advertised again in the local papers for a hearing at the Executive Board meeting. Once the Executive Board adopts the amendment, it emailed to the TDOT. If there is objection to the amendment either from the public or by the Committees, the TPO will take appropriate action regarding the comments. If the change is an adjustment, the TPO will provide TDOT with the appropriate

documentation to make the adjustment and TDOT will forward it onto FHWA/FTA. A summary of adjustments is provided to the TPO Technical Committee and Executive Board periodically throughout the year.

7.0 GLOSSARY & ACRONYMS

7.1 Phase of Work Abbreviations/Glossary

CON or **CN** (Construction): Work by the agency or contractor(s) to construct the project, possibly including utility relocation.

ITS (Intelligent Transportation Systems): Procuring, developing, or integrating technology to manage transportation facilities, improve safety, or mobility.

OPER: Operating the transportation system such as incurring costs related to the day-to-day operations or maintenance of transit vehicle systems, traffic signal systems, or intelligent transportation systems.

PE-N (Preliminary Engineering – **NEPA**): Includes activities from the inception of the project, fulfilling the requirements of the National Environmental Policy Act of 1969 and all applicable legislation, regulations, executive orders, and directives, up to the approval of the environmental document.

PE-D (Preliminary Engineering – Design): Preliminary engineering design work, according to accepted engineering practices, after approval of the environmental document.

PUR: Procuring equipment, software, or vehicles.

ROW or **RW**: Work from the distribution of ROW plans up to advertising for bids or commencement of work by the Agency, dealing with real property acquisition, temporary and permanent easements, and utility relocation.

Training: Training activities.

7.2 Funding Abbreviations

Section 5307 Section 5307 Urbanized Area Formula

Section 5310 Section 5310 Mobility of Seniors and Disabilities

Section 5339 Section 5339 Bus and Bus Facilities

ACPHSIP Accelerated Construction Penalty Highway Safety Improvement Program

CMAQ Congestion Mitigation and Air Quality

EN Enhancement

ERP Emergency Relief Program

FLAP Federal Lands Access Program

FLTP Federal Land Transportation Program

HPP High Priority Project

HSIP Highway Safety Improvement Program

IM Interstate Maintenance

LOCAL Local Project

L-STP Local Interstate Connector Program

Local Surface Transportation Program

L-STBG Local Surface Transportation Block Grant Program

NHFP National Highway Freight Program

NHPP National Highway Performance Program

RPHSIP Repurposed Penalty Highway Safety Improvement Program

S-STBG State Surface Transportation Block Grant Program

S-STBG-TA Transportation Alternatives Program

STA State Funds (including Multimodal Access Grant Program)

7.3 Transportation Planning Abbreviations

3C Continuing, Cooperative, and Comprehensive

CMP Congestion Management Process

EPA Environmental Protection Agency

FAST Act Fixing America's Surface Transportation Act

FHWA Federal Highway Administration
FTA Federal Transit Administration

IAC Interagency Consultation

ITS Intelligent Transportation System

MAP-21 Moving Ahead for Progress in the 21st Century Act

MPO Metropolitan Planning Organization

NAAQS National Ambient Air Quality Standard

RPO Rural Planning Organization

SIP State Implementation Plan

STIP State Transportation Improvement Program

TDOT Tennessee Department of Transportation

Transportation Improvement Program

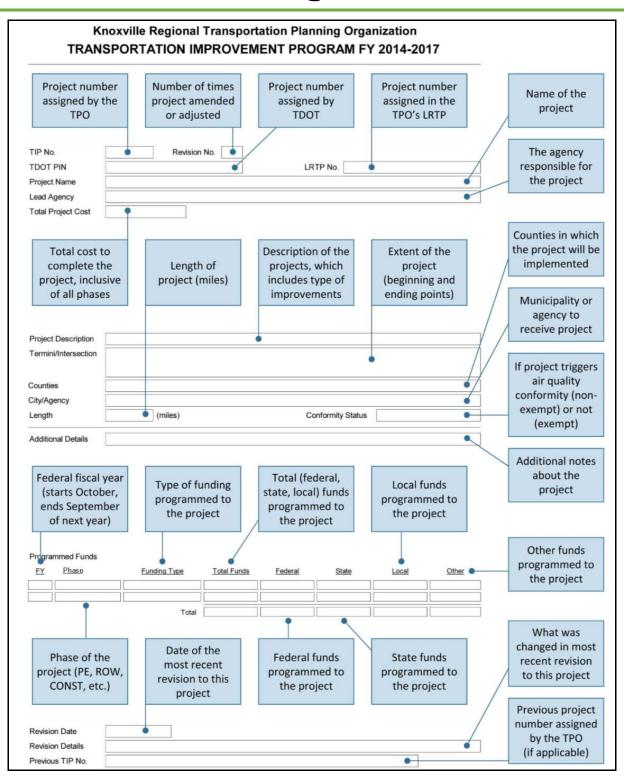
TPO Knoxville Transportation Planning Organization

UZA Urbanized Area

TIP

8.0 PROJECT DETAIL PAGES

8.1 How to Read a TIP Page



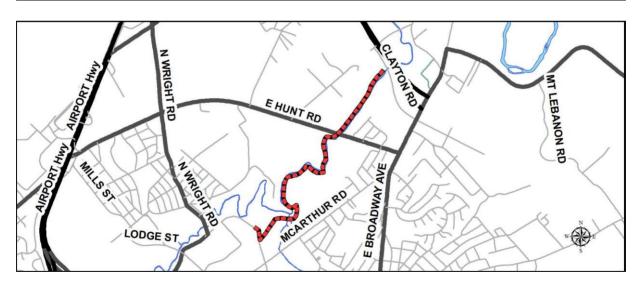
The TIP Project ID numbering is different from precious versions of the TIP. The previous format was based on the first year of the TIP followed by a 3-digit number (e.g., 2014-001). Starting with this TIP, the numbers for existing projects being carried forward will remain the same and a 2-digit year prefix code will be used to denote it is in the next TIP. Therefore, if Project 2014-001 is carried forward to the FY 2017-2020 TIP its project ID becomes 17-2014-001.

8.2.1 Blount County Projects

TIP No.	17-2014-060	Revision No. 0	Mobility Plan No.	09-211		
TDOT PIN			STIP N	lo.		
Project Name	Morganton Rd. Road	dway Improvement				
Lead Agency	Blount County					
Total Project Cost	\$5,500,000					
Project Description	Reconstruct two lan	e section of Morganto	on Rd. with shoulders,	totaling 2.3 ı	miles in length. I	HPP, TN-280.
Termini/Intersection	Morganton Rd. from	Foothills Mall Dr. to	William Blount Dr. (SR	:-335)		
Counties	Blount					
City/Agency	Blount County					
Length	2.3 (miles	\$)	Confor	rmity Status	Exempt	
Additional Details						
Programmed Funds						
<u>FY</u> <u>Phase</u>	Funding Ty	<u>pe</u> <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>
2017 PE-N/PE-D/RW	//CN HPP	\$750,000	\$750,000	\$0	\$0	\$0
		Total \$750,000	\$750,000	\$0	\$0	\$0
Revision Date						
Revision Details						
Previous TIP No.	2011-030, 2014-060)				
	LAMAR ALEXAN	DER PKWY- GS RD MORGAMOURO O			SEMERVILLE RD LAMAR ALEXA	NDER PRWY

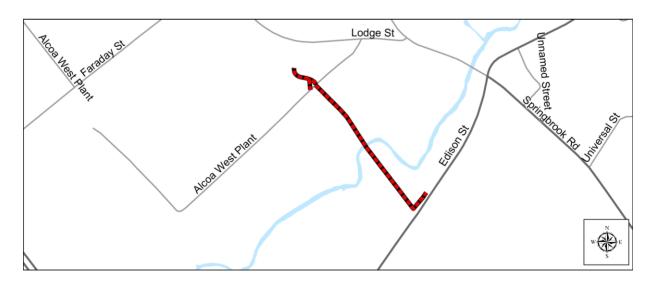
8.2.2 City of Alcoa Projects

TIP No.	17-2014-028	Revision No. 1	Mobility Plan No	. 13-1002						
TDOT PIN	120116.00		STIP	No.						
Project Name	Pistol Creek Greenw	ay - Phase IV								
Lead Agency	City of Alcoa									
Total Project Cost	\$1,509,852									
Project Description		oot wide greenway trail 200 feet of wood board				6 linear feet				
Termini/Intersection		stol Creek Phase II Greenway at Wright Rd (Meadowood Apartments) to Clayton Greenway Trail egment and adjoining sidewalk system near Clayton Dr (South)								
Counties	Blount									
City/Agency	City of Alcoa									
Length	2.2 (miles)	Conf	ormity Status	Exempt					
Additional Details										
Programmed Funds										
FY Phase	Funding Typ	e <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>				
2017 PE-D/RW/C	N L-STBG	\$1,356,193	\$1,084,954	\$0	\$271,239	\$0				
		Total \$1,356,193	\$1,084,954	\$0	\$271,239	\$0				
Revision Date	4/27/2017									
Revision Details	Adjust the project by updating mobility plan number.									



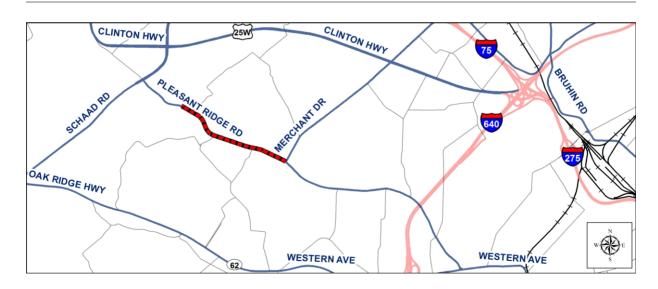
TIP No.	17-2017-023	Revision No. 0	Mobility Plan No	o. 13-206		
TDOT PIN	125327.00		STIF	No.		
Project Name	Tesla Blvd					
Lead Agency	City of Alcoa					
Total Project Cost	\$10,378,614					
Project Description	Construct new 2 lane bo Road. The connection w drainage system.					
Termini/Intersection	Local Interstate Connect	or/Associate blvd t	to East Edison/Spr	ringbrook Rd		
Counties	Blount					
City/Agency	City of Alcoa					
Length	0.8 (miles)		Con	formity Status	Non-Exempt	
Additional Details						
Programmed Funds						
FY Phase	Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	Local	Other
2017 CON	L-STBG	\$9,780,000	\$7,824,000	\$0	\$1,956,000	\$0
		stal \$9,780,000	\$7,824,000	\$0	\$1,956,000	\$0
Revision Date	4/26/2017					
Revision Details	Added to the FY2017-20	20 TIP to be consi	stent with Mobility	Plan 2040		
Previous TIP No.						
Cuite Pennood Po	Foundin View of	ACC2 West Prant	Springbrook Ro	Julivers?	Unnamed S	60,

TIP No		17-201	7-032	Rev	rision No.	0	Mobility Plan N	No. Consistent v	vith Mobility Plan	Goal 2
TDOT	PIN	122659	9.00				ST	TP No.		
Project	Name	Duck P	ond Walking	and Bik	e Path Pl	hase 2				
Lead A	gency	City of	Alcoa							
Total P	roject Cost	\$796,2	97							
Project	Description	associa	ation with Pha	ase 1 of	the walki	ng and		oaches, connect oughout Alcoa, lii d access.		
Termin	i/Intersection	over the	e future Tesla	a under	oasses ald	ong an	existing railroad	nultiuse path term d berm and cross ay trail adjacent	sing Pistol Creek	via the
Countie	es	Blount								
City/Ag	jency	City of	Alcoa							
Length		0.3	(miles	s)			Co	onformity Status	Exempt	
Additio	nal Details									
Progra	mmed Funds									
<u>FY</u>	<u>Phase</u>		Funding Ty	<u>pe</u>	Total Fu	<u>ınds</u>	<u>Federal</u>	<u>State</u>	Local	Other
2017	CON		HPP		\$692	2,975	\$554,380	\$0	\$138,595	\$0
				Total	\$692	2,975	\$554,380	\$0	\$138,595	\$0
Revisio	on Date	7/26/20)17							
Revisio	on Details	in HPP	funds in FY th in conjunct	2017 fo	construc	ction. T	his project will i	\$692,975 (\$554, nvolve constructi e path will also ir	on and renovation	n of multi-
Previou	us TIP No.									



8.2.3 City of Knoxville Projects

TIP No.		17-2	014-037	Rev	rision No. 2	Mobility Plan I	No. 09-616			
TDOT F	PIN	1010	00.800			ST	TP No.			
Project	Name	Plea	sant Ridge Rd.							
Lead A	gency	City	of Knoxville							
Total Pr	roject Cost	\$6,6	24,309							
Project	Description	Rec	onstruct 2-lane r	oad witl	h addition of tur	n lanes and bicy	/cle/pedestrian fa	acilities		
Termini	/Intersection	Mer	chant Dr to Kno	xville Ci	ty limits (Count	ry Brook Dr)				
Countie	s	Kno	nox							
City/Age	ency	Kno	noxville							
Length		1.6	(miles)		Co	onformity Status	Exempt		
Addition	nal Details					ents to determinate ocal regulations.	ne whether modi	fication and u	pdates are	
Progran	nmed Funds									
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>e</u>	Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>	
2017	CON		L-STBG		\$4,450,000	\$3,560,000	\$0	\$890,000	\$0	
2017	PE-N/PE-D)	L-STBG		\$550,000	\$440,000	\$0	\$110,000	\$0	
				Total	\$5,000,000	\$4,000,000	\$0	\$1,000,000	\$0	
Revision	n Date	4/26	/2017							
Revision	n Details	proje	ect description a	nd map	per Expedited	Project Delivery	TBG to FY2017 t Report (TDOT c ise total project (oncurred with		
Previou	s TIP No.	2002	2-031, 2004-021	, 2006-0	018, 2008-040,	2011-047, 2014-	-037			



TIP No.	17-2014-042	Revision No. 0	Mobility Plan No.	13-602		
TDOT PIN	120004.00		STIP	No.		
Project Name	Traffic Control Equipm	nent Upgrade - Knoxvi	lle			
Lead Agency	City of Knoxville					
Total Project Cost	\$7,000,000					
Project Description	Purchase, installation software. Project also software.					
Termini/Intersection	Kingston Pike (US-70/ 33) from Jackson Ave		enter Way to Lovel	l Rd (12 miles	s) and Broadway ((US-441/SR-
Counties	Knox					
City/Agency	City of Knoxville					
Length	19 (miles)		Confo	ormity Status	Exempt	
Additional Details	\$744,880 federal CMA	Q funds previously ol	oligated.			
Programmed Funds						
FY Phase	Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	Local	Other
2017 PE-D/RW/C	CN L-STBG	\$6,068,900	\$4,855,120	\$0	\$1,213,780	\$0
		Total \$6,068,900	\$4,855,120	\$0	\$1,213,780	\$0
Revision Date						
Revision Details						
Previous TIP No.	2006-111, 2008-051, 2	2011-057, 2014-042				
330 61	25V 25V	25W	75	331	40 11e	

168

TIP No.	17-2014-047	Revision No. 1	Mobility Plan No. 1	3-1006		
TDOT PIN	115213.00		STIP No	D.		
Project Name	East Knoxville Side	walk Improvements				
Lead Agency	City of Knoxville					
Total Project Cost	\$750,000					
Project Description		lk network between a h 0 linear feet of sidewall		neighborhoo	ds along S. Cas	stle St.
Termini/Intersection	S. Castle St. from M	Nartin Luther King Jr. A	ve. to Wilson Ave.			
Counties	Knox					
City/Agency	City of Knoxville					
Length	0.27 (miles	s)	Conform	nity Status E	Exempt	
Additional Details	\$146,000 federal Cf	MAQ funds previously	obligated for this projec	ct.		
Programmed Funds FY Phase 2017 ROW/COM	Funding Ty	pe Total Funds \$630,500 Total \$630,500	Federal \$504,400 \$504,400	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$126,100 \$126,100	<u>Other</u> \$0
Revision Date	4/27/2017					
Revision Details	Adjust the project by	y updating mobility plai	n number.			
Previous TIP No.	2011-066, 2014-047	7				
MILLIGAN MIL	NELMINOOD ST ST BEAL BOURNEST WASHINGTON THEMBREE ST SHEMBREE ST	ASTILES TO A	SMARA STLANSING AVE	SHIELDS AVE WILSON AVE	SKYLII O BERMAN O	, E

17-2014-031	Revision No. 1	Mobility Plan No. 1	10-697		
116003.00		STIP No	o		
N.Central St. Road	Diet and Streetscape F	Project			
City of Knoxville					
\$6,045,000					
			es with center	er turn lane. Rer	nainder of
Woodland Ave to De	epot Ave				
Knox					
City of Knoxville					
1.2 (miles	;)	Conforr	nity Status	Non-Exempt	
\$356,000 federal L-3	STP funds previously o	obligated for this project	ct.		
Funding Tyr	pe <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>
L-STBG	\$5,600,000	\$4,480,000	\$0	\$1,120,000	\$0
	Total \$5,600,000	\$4,480,000	\$0	\$1,120,000	\$0
6/29/2017					
Adjust project by ad	ding \$1,100,000 (\$880	,000 federal/\$220,000	local) L-ST	BG to FY2017 (Construction.
2011-031, 2014-031					
	earteanie orie	BROADOW			
	116003.00 N.Central St. Road I City of Knoxville \$6,045,000 Road diet and street public ROW used fo Woodland Ave to De Knox City of Knoxville 1.2 (miles #356,000 federal L-S Funding Tyr L-STBG 6/29/2017 Adjust project by add 2011-031, 2014-031	N.Central St. Road Diet and Streetscape F City of Knoxville \$6,045,000 Road diet and streetscape project, reduce public ROW used for bike lanes and street Woodland Ave to Depot Ave Knox City of Knoxville 1.2 (miles) \$356,000 federal L-STP funds previously of the street str	N.Central St. Road Diet and Streetscape Project City of Knoxville \$6,045,000 Road diet and streetscape project, reduce from 4-lanes to 2-lane public ROW used for bike lanes and street parking. Woodland Ave to Depot Ave Knox City of Knoxville 1.2 (miles) Conforr \$356,000 federal L-STP funds previously obligated for this project Funding Type Total Funds \$5,600,000 \$4,480,000 Total \$5,600,000 \$4,480,000 2011-031, 2014-031	N.Central St. Road Diet and Streetscape Project City of Knoxville \$6,045,000 Road diet and streetscape project, reduce from 4-lanes to 2-lanes with centropublic ROW used for bike lanes and street parking. Woodland Ave to Depot Ave Knox City of Knoxville 1.2 (miles) Conformity Status \$356,000 federal L-STP funds previously obligated for this project. Funding Type Total Funds Federal State L-STBG \$5,600,000 \$4,480,000 \$0 Total \$5,600,000 \$4,480,000 \$0 6/29/2017 Adjust project by adding \$1,100,000 (\$880,000 federal/\$220,000 local) L-ST 2011-031, 2014-031	Title Total Total Total State Local L-STBG S5,600,000 S4,480,000 S0 S1,120,000 S1,120,000 S1,120,000 S20,120,131 S5,600,000 S4,480,000 S0 S1,120,000 S1,120,000 S1,120,000 S20,120,131 S1,000,000 S20,120,000 S20,120,000 S1,200,000 S1,200,000 S20,120,000 S1,120,000 S20,120,000 S20

TIP No.	17-2014-032	Rev	ision No. 0	Mobility Plan I	No. 09-617		
TDOT PIN	109677.00			ST	IP No.		
Project Name	South Knoxville	e Waterfront I	Roadway Impro	ovements			
Lead Agency	City of Knoxville	е					
Total Project Cost	\$7,511,063						
Project Description		ew roundabo	ut constructed	at the intersection		ations along Sevie m/Sevier Ave./Isl	
Termini/Intersection	Sevier Ave from	m Davenport	Rd to new rour	ndabout at Island	d Home Ave (0.3	2 miles)	
Counties	Knox						
City/Agency	City of Knoxville	е					
Length	0.32	(miles)		Co	onformity Status	Exempt	
Additional Details							
Programmed Funds							
FY Phase	<u>Fundi</u>	ng Type	Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>
2017 ROW/CON	S-S	STBG	\$7,511,063	\$6,008,850	\$0	\$1,502,213	\$0
		Total	\$7,511,063	\$6,008,850	\$0	\$1,502,213	\$0
Revision Date							
Revision Details							
Previous TIP No.	2006-137, 2008	8-009, 2011-0	032, 2014-032				
		LANG	FORD AVE	PHILLIPS AV	~ PHILLI	- OME AV	- CORMICK ST

DATE CHRISTINE AVE COLITERS OF

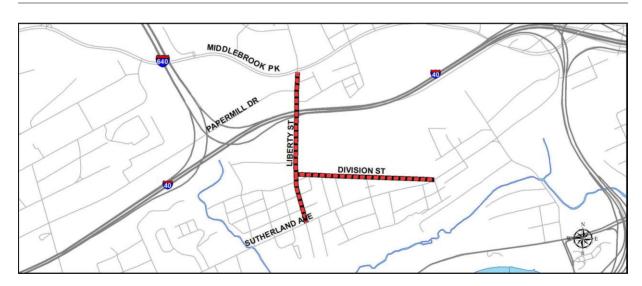
SUSANNE AVE

TIP No.	17-2014-001	Revision No. 0	Mobility Plan No.	09-618		
TDOT PIN	110262.00		STIP	No.		
Project Name	I-275 Business/Ind	dustrial Park Access Im	provements			
Lead Agency	City of Knoxville					
Total Project Cost	\$6,000,000					
Project Description		rsection improvements Ave. to Bernard Ave.; N				
Termini/Intersection	and Baxter Ave. Ir	extend from W. Fifth Aventhers of the work	University Ave. with V			
Counties	Knox					
City/Agency	City of Knoxville					
Length	0.5 (mil	es)	Confo	rmity Status	Non-Exempt	
A delition of Descrip	Φ4 000 000 factors	LUDD (ablianted for this and	1		
Additional Details	\$1,600,000 federa	al HPP funds previously	obligated for this proj	ect.		
Programmed Funds						
<u>FY</u> <u>Phase</u>	Funding 1	Type Total Funds	<u>Federal</u>	<u>State</u>	Local	Other
2017 CON	HPP	\$3,624,375	\$2,899,500	\$0	\$724,875	\$0
		Total \$3,624,375	\$2,899,500	\$0	\$724,875	\$0
Revision Date						
Revision Details		<u>J</u>				
Previous TIP No.	2006-138, 2008-0	21, 2011-001, 2014-00°	 1			
NPIII						

TIP No.	17-2014-073	Revi	sion No. 1	Mobility Plan N	lo. 13-852		
TDOT PIN	113061.02			STI	IP No.		
Project Name	Knoxville South	n Waterfront F	edestrian/Bicycl	e Bridge	<u> </u>		
Lead Agency	City of Knoxville	е					
Total Project Cost	\$31,500,000						
Project Description	Connect the so	outh waterfron	t to University of	Tennessee an	d the north water	front trails.	
Termini/Intersection	University of Te	ennessee cam	pus to Scottish	Pike			
Counties	Knox						
City/Agency	City of Knoxville	е					
Length	0.3	(miles)		Со	nformity Status	Exempt	
Additional Details							
Programmed Funds							
FY Phase	<u>Fundi</u>	ng Type	Total Funds	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>
2017 PE-D	L-S	STBG	\$500,000	\$400,000	\$0	\$100,000	\$0
		Total	\$500,000	\$400,000	\$0	\$100,000	\$0
Revision Date	1/11/2017						
Revision Details	Adjust the proje	ect by reducin	g FY17 L-STBG	to \$500,000 (\$	400,000 federal/	\$100,000) for PE	-D.
Previous TIP No.	2011-043, 2014	4-073					
			The state of the s	GAN ST	SEVIER AVE	ISL	AND HOME AVE

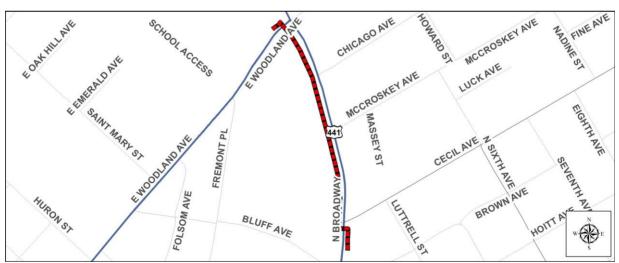
TIP No.	17-2014-078	Revision No. 1	Mobility Plan No	. 13-1003		
TDOT PIN	120004.01		STIP	No.		
Project Name	Chapman Highway	Advanced Traffic Mana	agement System			
Lead Agency	City of Knoxville					
Total Project Cost	\$1,770,000					
Project Description	Expand the City of k	(noxville's Advanced T	raffic Management	System along	Chapman High	way.
Termini/Intersection	Chapman Hwy (US-	441/SR-71) from Mour	ntain Grove Dr to Bl	lount Ave		
Counties	Knox					
City/Agency	City of Knoxville					
Length	6.3 (miles	;)	Conf	formity Status	Exempt	
Additional Details		MAQ funds previously of Intelligent Transportati e safety.				
Programmed Funds						
<u>FY</u> <u>Phase</u>	Funding Typ	<u>oe</u> <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>
2017 PE-N/PE-D/RV	V/CN CMAQ	\$1,770,000	\$1,770,000	\$0	\$0	\$0
		Total \$1,770,000	\$1,770,000	\$0	\$0	\$0
Revision Date	4/27/2017					
Revision Details	Adjust the project by	updating Mobility Plan	n number.			
Previous TIP No.	2014-078					
TITON HAVE THE TITON THE T		CHAPMAN HWY	441		E GOVERNOR COMMSC	168

TIP No		17-2014-0	80	Revis	sion No.	2	Mobility Pla	an No. 1	3-1004				
TDOT	PIN	122977.00)					STIP No					
Project	Name	Liberty Str	Liberty Street Multimodal Project										
Lead A	gency	City of Kno	oxville										
Total P	roject Cost	\$1,956,53	2										
Project	Description	Addition o	Addition of sidewalks and bicycle facilities along Liberty and Division Streets.										
Termin	i/Intersection	Liberty Str	eet from Mi	ddlebro	ok Pike	to Suth	nerland Aver	nue					
Countie	es	Knox											
City/Ag	jency	City of Knoxville											
Length 1.1 (miles) Conformity Status Exempt													
Additio	nal Details	\$38,400 fe	ederal TAP	funds pı	reviously	y obliga	ated for this p	oroject.					
Progra	mmed Funds												
<u>FY</u>	<u>Phase</u>	J	Funding Type	!	Total Fu	ınds	<u>Federal</u>		<u>State</u>	<u>Local</u>	<u>Other</u>		
2017	PE-D		L-STBG-TA		\$152	2,000	\$121,60	0	\$0	\$30,400	\$0		
2017	PE-D/RW/C	N	L-STBG		\$619	,065	\$495,25	2	\$0	\$123,813	\$0		
2017	PE-D/RW/C	N	L-STBG-TA		\$1,185	,467	\$948,37	4	\$0	\$237,093	\$0		
				Total	\$1,956	5,532	\$1,565,22	6	\$0	\$391,306	\$0		
Revisio	Revision Date 4/27/2017												
Revisio	on Details	Adjust the project by updating mobility plan number.											
Previou	us TIP No.	2014-080	·						·				



TIP No.	17-2017-001	Revision No. 0	Mobility Plan N	No. Consistent v	v/Mobility Plan P	rinciple1			
TDOT PIN	106077.00		ST	IP No.					
Project Name	Jackson Avenue, Bri	idges over ramp to	Gay St.						
Lead Agency	City of Knoxville								
Total Project Cost	\$10,033,318								
Project Description	Bridge replacement west) leading from J	or possible rehab (r ackson Ave to Gay	no additional lanes) o St. The ramps abut	of two ramp stru historic structur	ctures (one east es	and one			
Termini/Intersection	Jackson Avenue, rar	mps east and west	of Gay Street						
Counties Knox									
City/Agency City of Knoxville									
Length 0.1 (miles) Conformity Status Exempt									
Additional Details \$228,710 federal BRR-L/STP funds previously obligated for this project.									
Programmed Funds									
FY Phase	Funding Typ	<u>e Total Fund</u>	s <u>Federal</u>	<u>State</u>	<u>Local</u>	Other			
2017 PE-D/RW/C	N L-STBG	\$4,961,81	8 \$3,969,454	\$0	\$992,364	\$0			
2017 PE-D/RW/C	N S-STBG	\$4,785,61	2 \$3,828,490	\$0	\$957,122	\$0			
		Total \$9,747,43	\$7,797,944	\$0	\$1,949,486	\$0			
Revision Date									
Revision Details									
Previous TIP No.	2011-075								
					J				
					// \				

TIP No.	17-2017-009	Revision No. 0	Mobility Plan No. 13	-838		
TDOT PIN			STIP No.			
Project Name	First Creek Greenwa	ay - Broadway Streetsca	ipe			
Lead Agency	City of Knoxville					
Total Project Cost	\$2,604,148					
Project Description	Construct a new sha Woodland Ave	ared use path extending	First Creek Greenway	from near	Cecil Ave to near	
Termini/Intersection	Woodland Ave to C	ecil Ave				
Counties	Knox					
City/Agency	City of Knoxville					
Length	0.3 (miles	3)	Conformi	ty Status	Exempt	
Additional Details						
Programmed Funds						
FY Phase	Funding Typ	<u>oe</u> <u>Total Funds</u>	Federal S	State	<u>Local</u>	<u>Other</u>
2018 PE-N/PE-D/RV	V/CN L-STBG	\$2,000,000	\$1,600,000	\$0	\$400,000	\$0
2018 PE-N/PE-D/RV	V/CN L-STBG-T/	\$604,148	\$483,318	\$0	\$120,830	\$0
		Total \$2,604,148	\$2,083,318	\$0	\$520,830	\$0
Revision Date	4/26/2017					
Revision Details	Added to the FY201	7-2020 TIP to be consis	stent with Mobility Plan	2040		
Previous TIP No.						
				TA .		



TIP No.	17-2017-011	Revisi	on No. 0	Mobility Plan N	o. 17-901		
TDOT PIN				STI	P No.		
Project Name	East Knox Greenw	ay - Phase	1				
Lead Agency	City of Knoxville						
Total Project Cost	\$1,804,054						
Project Description	Construct a new sh Arboretum	nared use p	ath connec	cting First Creek Gre	eenway to Knox	wille Botanical G	Sardens and
Termini/Intersection	Willow Ave to Know	xville Botani	ical Garder	าร			
Counties	Knox						
City/Agency	City of Knoxville						
Length	1.6 (mile	es)		Cor	nformity Status	Exempt	
Additional Details							
Programmed Funds							
<u>FY</u> <u>Phase</u>	Funding T	ype	Total Funds	<u>Federal</u>	<u>State</u>	Local	Other
2019 PE-N/PE-D	D L-STBC	3	\$170,000	\$136,000	\$0	\$34,000	\$0
2020 CON	L-STBC	<u> </u>	\$1,530,000	\$1,224,000	\$0	\$306,000	\$0
		Total	\$1,700,000	\$1,360,000	\$0	\$340,000	\$0
Revision Date	4/26/2017						
Revision Details	Added to the FY20	17-2020 TII	P to be cor	nsistent with Mobility	y Plan 2040		
Previous TIP No.							
AME DR		AGNOLIA AV					JE



TIP No.	17-2017-015	Revi	ision No. 0	Mobility Plan N	No. 09-689		
TDOT PIN		<u></u> -		ST	IP No.		
Project Name	Papermill Drive C	omplete St	treet				
Lead Agency	City of Knoxville						
Total Project Cost	\$18,492,300						
Project Description	Reconstruct 2-lar	ne road with	addition of to	urn lanes and bicy	cle/pedestrian fa	acilities	
Termini/Intersection	Weisgarber Rd to	Kingston I	Pk (SR-1)				
Counties	Knox						
City/Agency	City of Knoxville						
Length	0.6 (m	iles)		Co	onformity Status	Exempt	
Additional Details							
Programmed Funds							
<u>FY</u> <u>Phase</u>	<u>Funding</u>	<u>Type</u>	Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>
2020 PE-N/PE-I	D L-STE	3G	\$1,250,000	\$1,000,000	\$0	\$250,000	\$0
		Total	\$1,250,000	\$1,000,000	\$0	\$250,000	\$0
Revision Date	4/26/2017						
Revision Details	Added to the FY2	<u>-</u> 2017-2020 -	TIP to be con	sistent with Mobilit	ty Plan 2040		
Previous TIP No.							
¥ as	GATELA	7	GA,	///		/	1
THE SHEFFIELD DR			GATELN			BROOKVALELN	
EZ JULDA	ERDR	WGHT	INGALE LN	DP.			\
NEW CASAIR BO ORCHEST	, 	0 401175	PAPE	RMILL DR			N MEISCARBER RO
		A STATE OF THE PARTY OF THE PAR	ITS WESTFIEL	B ELM			The state of the s
KINGSTON	PIKE 111	KING	STON PIKE	CIRCLELM		KIŁ	IGST(

TIP No.	17-2017-017	Revision No. 0	Mobility Plan No. 17-	-608		
TDOT PIN			STIP No.			
Project Name	Magnolia Avenue S	treetscape - Phase 3 a	and 4			
Lead Agency	City of Knoxville					
Total Project Cost	\$11,716,594					
Project Description			e existing right of way that, bike lanes, improved side			
Termini/Intersection	N. Bertrand St to Ch	nerry St				
Counties	Knox					
City/Agency	City of Knoxville					
Length	0.9 (miles	3)	Conformit	y Status	Exempt	
Additional Details						
Programmed Funds FY Phase 2019 PE-N/PE-D	Funding Ty	Total Funds \$1,000,000 Total \$1,000,000	Federal S \$800,000 \$800,000	\$0 \$0	<u>Local</u> \$200,000 \$200,000	<u>Other</u> \$0
Revision Date Revision Details Previous TIP No.	4/26/2017 Added to the FY201	7-2020 TIP to be cons	sistent with Mobility Plan	2040		
A SYTH AVE	WASHINGTON AVE	SNOLIA AVE 11	NCHERRY ST. WILLIAM ST.	Shark ST	BIDDLEST	JOKE PIVE

TIP No.		17-201	7-028	Revision No.	0	Mobility Plan No.	Consistent v	vith Mobility Plan	Principle 3				
TDOT PI	IN					STIP	No.						
Project N	Name	Bus Ra	apid Transit Bu	s Stops/Passer	nger In	formation Systems	Install						
Lead Age	ency	City of Knoxville											
Total Pro	ject Cost	\$6,395	5,000										
Project D	Description	Informa	ation Systems re, and a numb	(PIS) at each st	tation,	s (one for each dire TSP software integ tions, which will be	grated into the	City's ATMS cer	ntral				
Termini/I	ntersection					orth Broadway, Su ation and northern							
Counties	i	Knox											
City/Age	ncy	City of	Knoxville										
Length		6.5	(miles)			Confe	ormity Status	Exempt					
Additiona	al Details												
Program	med Funds												
<u>FY</u>	<u>Phase</u>		Funding Type	<u>Total Fu</u>	<u>unds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>				
2017	PE-N		CMAQ	\$465	5,000	\$465,000	\$0	\$0	\$0				
2018	PE-D		CMAQ	\$325	5,000	\$325,000	\$0	\$0	\$0				
2018	ROW		CMAQ	1	0,000	\$200,000	\$0	\$0	\$0				
2019	CON		CMAQ	\$5,405		\$5,405,000	\$0	\$0	\$0				
				Total \$6,395	5,000	\$6,395,000	\$0	\$0	\$0				
Revision	Date	1/12/20	017										
Revision	Details	Added	to the FY17-2	0 TIP									
Previous	TIP No.												
	\times	X	7/	/		1/	1		J-1				



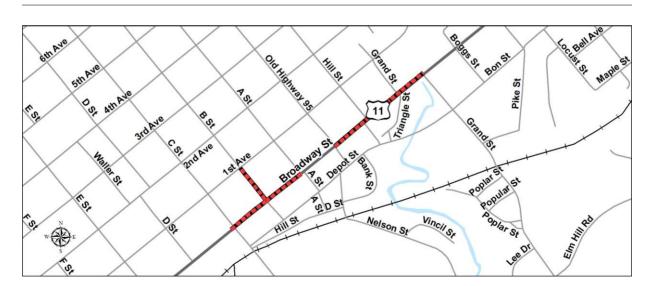
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8.2.4 City of Lenoir City Projects Knoxville Regional Transportation Planning Organization **TRANSPORTATION IMPROVEMENT PROGRAM FY 2017-2020**

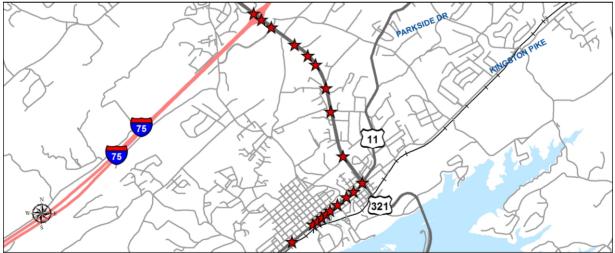
TIP No.	17-2014-015	Revision No. 0	Mobility Plan No. 1	13-401		
TDOT PIN	120439.00		STIP No	O		
Project Name	Simpson Rd. Recons	struction				
Lead Agency	City of Lenoir City					
Total Project Cost	\$898,200					
Project Description	Reconstruct 2-lane reinclude sidewalk on o	roadway from 18 feet to one side.	26 feet; constructing	left turn lan	es at selected loc	ations and
Termini/Intersection	Simpson Rd from US	S-321 to Shaw Ferry Ro	d.			
Counties	Loudon					
City/Agency	Loudon County					
Length	0.7 (miles)	Conforr	mity Status	Exempt	
Additional Details						
Programmed Funds						
FY Phase	Funding Typ	<u>e Total Funds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>
2017 CON	L-STBG	\$724,000	\$579,200	\$0	\$144,800	\$0
		Total \$724,000	\$579,200	\$0	\$144,800	\$0
Revision Date						
Revision Details						
Previous TIP No.	2014-015					
		XX	~ /	X		XX



TIP No).	17-2	014-070	Revision No. 1	lo. 09-402								
TDOT PIN 120086.00 STIP No.													
Project	Name	Lenc	Lenoir City Downtown Streetscapes - Phase 2										
Lead A	gency	City	City of Lenoir City										
Total F	Project Cost	\$1,6	50,000										
Project Description		Streetscape improvements along Hwy. 11/S.R. 2 (Broadway) between Grand Street and C Street, and B Street between 1st Avenue and Broadway Street											
Termini/Intersection			Broadway St (US-11/SR-2) from C Street to A Street (0.14 miles) and from Kingston Street to Grand Street (0.19 miles) and B Street between 1st Avenue and Broadway Street (0.07 miles)										
Counti	es	Loud	oudon										
City/Aç	gency	City	City of Lenoir City										
Length		0.4	(miles)		Co	nformity Status	Exempt						
Additio	nal Details		20% L-STBG matc funds.	h \$175,818 is com	prised of \$167,02	7 TDOT Multim	odal Grant fun	ds and \$8,791					
Progra	mmed Funds												
<u>FY</u>	<u>Phase</u>		Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>					
2017	CON		S-STBG-TA	\$512,500	\$410,000	\$97,375	\$5,125	\$0					
2017	PE-D/RW/C	:N	L-STBG	\$375,000	\$300,000	\$71,250	\$3,750	\$0					
2017	PE-D/RW/C	:N	STA	\$762,500	\$0	\$724,375	\$38,125	\$0					
			T	otal \$1,650,000	\$710,000	\$893,000	\$47,000	\$0					
Revisio	on Date	1/11	/2017										
Revision Details		state (\$41 \$762	st the project by red s/\$3,750 local); add 0,000 federal/\$97,3 2,500 (\$724,375 sta	ing state TAP (S-S 375 state/\$5,125 lo	TBG-TA) for FY17 cal); and reducing	7 Construction in MMAG funds for	n the amount or FY17 Const	of \$512.500					
Previou	us TIP No.	2011	-089, 2014-070										



TIP No.	17-2014-2	32 F	Revision No. 2	Mobility Plan N	lo. 13-812		
TDOT PIN	121453.00)		STI	P No.		
Project Name	Lenoir City	/ ITS: Signal S	ystem Design				
Lead Agency	City of Ler	noir City					
Total Project Cost	\$1,333,50	0					
Project Description	The project		and implement ITS	signal system fo	r 20 coordinated	signals along US	S-321/SR-
Termini/Intersection	U.S. 11 fro	om G St to U.S	. 321 (1.2 miles) a	nd U.S. 321 from	U.S. 11 to I-75	SB ramps (2.7 m	iles)
Counties	Loudon						
City/Agency	City of Ler	noir City					
Length	3.9	(miles)		Cor	nformity Status	Exempt	
Additional Details	\$168,500	federal CMAQ	funds previously o	bligated for this p	project.		
Programmed Funds							
<u>FY</u> <u>Phase</u>	ļ	Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>
2017 PE-N/PE-D/RV	V/CN	CMAQ	\$1,165,000	\$1,165,000	\$0	\$0	\$0
		Tot	al \$1,165,000	\$1,165,000	\$0	\$0	\$0
Revision Date	4/27/2017						
Revision Details	Adjust this	project by upo	lating Mobility Plar	n number.			
Previous TIP No.	2014-232						
	X	7.5			JARKSIDE DR	House on Phre	K.

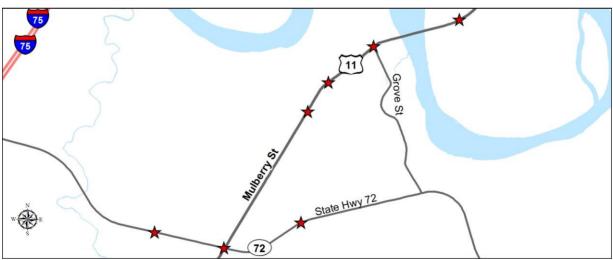


8.2.5 City of Loudon Projects

TIP No.	17-2014-009	Revi	ision No. 0	Mobility Plan N	lo. 13-402						
TDOT PIN	118671.00			STI	IP No.						
Project Name	Queener Rd. Rec	onstruction	l								
Lead Agency	City of Loudon										
Total Project Cost	\$1,285,000										
Project Description	Reconstruct 2-lan	e roadway	- widen from 15	5.8 feet to 26 fee	et, reduce curve	S.					
Termini/Intersection	Queener Rd from SR-72 to River Rd.										
Counties											
City/Agency	Loudon County										
Length		Cor	nformity Status	Exempt							
Additional Details	\$32,000 federal L	-STP funds	previously obli	igated for this pro	oject.						
Programmed Funds											
<u>FY</u> <u>Phase</u>	Funding ⁻	<u>Type</u>	Total Funds	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>				
2017 PE-D/RW/C	CN LIC		\$602,500	\$0	\$602,500	\$0	\$0				
2017 PE-D/RW/C	N L-STB	G _	\$602,500	\$482,000	\$0	\$120,500	\$0				
		Total	\$1,205,000	\$482,000	\$602,500	\$120,500	\$0				
Revision Date											
Revision Details											
Previous TIP No.	2014-009										
275 1 111 11 1 7											
	9	(1)			20	The second second					



TIP No.	17-2014-079	Revision No. 1	Mobility Plan No	. 17-802		
TDOT PIN			STIP	No.		
Project Name	City of Loudon Traffic	c Flow Improvement P	roject			
Lead Agency	City of Loudon					
Total Project Cost	\$1,343,400					
Project Description		frastructure at seven si unication and coordina		ons, including	updating vehicle	detection,
Termini/Intersection		ons within city limits on niles) and SR 72 from S				R 72 to
Counties	Loudon					
City/Agency	City of Loudon					
Length	4 (miles)	Conf	ormity Status	Exempt	
Additional Details						
Programmed Funds						
<u>FY</u> <u>Phase</u>	Funding Typ	<u>Total Funds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	Other
2017 PE-N/PE-D/RV	V/CN CMAQ	\$1,296,400	\$1,296,400	\$0	\$0	\$0
		Total \$1,296,400	\$1,296,400	\$0	\$0	\$0
Revision Date	4/27/2017					
Revision Details	Adjust project to upd	late Mobility Plan numb	oer.			
Previous TIP No.	2014-079					

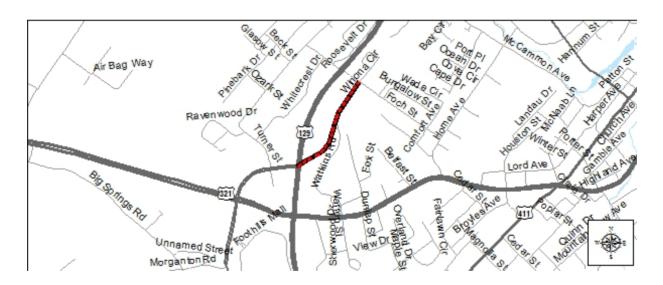


TIP No.	17-2014-083	Rev	ision No. 1	Mobility Plan N	lo. 17-401		
TDOT PIN	125149.00			STI	P No.		
Project Name	Blair Bend Road Re	esurfacin	g				
Lead Agency	City of Loudon						
Total Project Cost	\$700,000						
Project Description	Resurface existing markings to improv		to eliminate ha	zardous paveme	nt surface condi	tions and worn tra	avel lane
Termini/Intersection	Blair Bend Road fro	m U.S. I	Hwy 11 (SR-2)	to Blair Bend Roa	ad		
Counties	Loudon						
City/Agency	City of Loudon						
Length	1.9 (mile	s)		Co	nformity Status	Exempt	
Additional Details							
Programmed Funds							
FY Phase	Funding Ty	<u>pe</u>	Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>
2017 PE-N/PE-D/	CN L-STBG		\$700,000	\$560,000	\$0	\$140,000	\$0
		Total	\$700,000	\$560,000	\$0	\$140,000	\$0
Revision Date	4/27/2017						
Revision Details	Adjust project by up	odating M	obility Plan nu	mber.			
Previous TIP No.	2014-083						
		,	// ^				
	11)	lee'	Hund Section	e or of	Manson Dr		Perin Hill R.

Blair Bend Dr

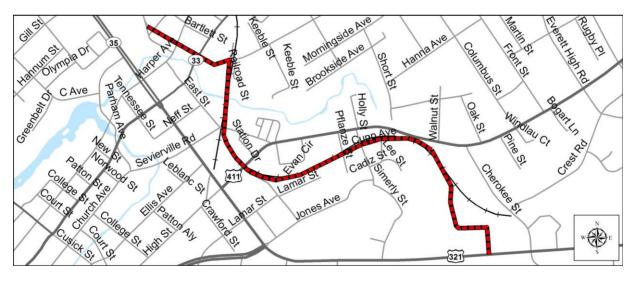
8.2.6 City of Maryville Projects

TIP No		17-201	4.007	Dovie	sion No. 2		Mobility Plan No	0 12 2	111			
TIP INO	•			Kevi	SIOII NO. Z	_ '	,		.11			
TDOT	PIN	123168	3.00				STIF	P No.				
Project	Name	Foothil	ls Mall Dr. Exte	nsion								
Lead A	gency	City of	Maryville									
Total P	roject Cost	\$4,100	4,100,000									
Project	Description		Extend Foothills Mall Dr. from US 129 Bypass to Foch St. with 2 to 3 lanes with curb and gutter which includes improvements at US 129 Bypass, Foch Street, Dunlap Street, and Watkins Road intersections									
Termin	i/Intersection	Foothil	ls Mall Dr. Exte	nsion f	rom US-129 E	Зура	ass to Foch St.					
Countie	es	Blount										
City/Ag	jency	City of	Maryville									
Length		0.5	(miles)				Cor	nformity	Status	Non-Exemp	t	
Additio	nal Details	\$123,2	00 federal L-ST	ΓP fund	ls previously o	oblig	gated for this p	roject.				
Progra	mmed Funds											
<u>FY</u>	<u>Phase</u>		Funding Type		Total Funds		<u>Federal</u>	Sta	ate	Local	<u>Other</u>	
2017	PE-D		L-STBG		\$256,000		\$204,800		\$0	\$51,200	\$	60
2018	ROW		L-STBG		\$1,202,000		\$961,600		\$0	\$240,400	\$	60
2019	CON		L-STBG		\$2,488,000		\$1,990,400		\$0	\$497,600	\$	60
				Total	\$3,946,000		\$3,156,800		\$0	\$789,200	\$	60
Revisio	on Date	4/26/20)17									
Revision	on Details		\$2,488,000 (\$1 oject cost to \$3			97,6	600 local) in L-S	STBG to	FY201	9 construction	n. Corrected	
Previou	ıs TIP No.	2014-0	07									



TIP No.	17-2014-077	Revision No. 1	Mobility Plan No. 1	3-808		
TDOT PIN	122605.00		STIP No).		
Project Name	Maryville Alcoa Adv	anced Traffic Managen	nent System Phase II			
Lead Agency	City of Maryville					
Total Project Cost	\$2,675,000					
Project Description		on and integration of sig SR33. Project also inc ware.				
Termini/Intersection	Various					
Counties	Blount					
City/Agency	City of Alcoa, City o	of Maryville				
Length	(miles	s)	Conform	nity Status	Exempt	
Additional Details	\$155,000 federal CI	MAQ funds previously o	bbligated for this projec	ct.		
Programmed Funds FY Phase 2017 PE-N/PE-D/RV	Funding Ty V/CN CMAQ	Total Funds \$2,520,000 Total \$2,520,000	Federal \$2,520,000 \$2,520,000	\$0 \$0	<u>Local</u> \$0 [<u>Other</u> \$0 \$0
Revision Date	4/27/2017					
Revision Details	Adjust project by up	odating Mobility Plan nu	mber.			
Previous TIP No.	2014-077					
Quarty Rd	J	Hum		e Rd Se'	kwy 4111	321

					-					
TIP No.	17-2	017-006	Revi	sion No. 0	Mobility Plan N	lo. 13-833				
TDOT PIN					STI	IP No.				
Project Name	Mary	ville to Townsend	Green	nway - Phase 1	(Brown Creek)					
Lead Agency	City	of Maryville								
Total Project Cost	\$1,7	,763,560								
Project Description		Construct a new shared use path between the existing Maryville/Alcoa Greenway at Aluminum Avenue o Lamar Alexander Pkwy along Brown Creek								
Termini/Intersection	Alun	ninum Ave to US 3	321							
Counties	Blou	nt								
City/Agency	City	of Maryville								
Length	1.2	(miles)			Со	nformity Status	Exempt			
Additional Details										
Programmed Funds										
FY Phase		Funding Type		Total Funds	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>		
2018 PE-N/PE-	D	L-STBG		\$176,356	\$141,085	\$0	\$35,271	\$0		
2019 ROW		L-STBG		\$516,723	\$413,378	\$0	\$103,345	\$0		
2020 CON		L-STBG		\$1,070,481	\$856,385	\$0	\$214,096	\$0		
			Total	\$1,763,560	\$1,410,848	\$0	\$352,712	\$0		
Revision Date	4/26	/2017								
Revision Details	Revision Details Added to the FY2017-2020 TIP to be consistent with Mobility Plan 2040									
Previous TIP No.										
·		· · · · · · · · · · · · · · · · · · ·						·		



TIP No.		17-20	017-007	Rev	ision No. 0	Mobility Plan N	No. 17-201			
TDOT PI	N					ST	IP No.			
Project Na	ame	Ame	merine Rd Improvements							
Lead Age	ency	City	y of Maryville							
Total Proj	ject Cost	\$1,91	1,919,711							
Project De	escription	Reco	econstruct 2-lane road with addition of turn lanes and sidewalk							
Termini/Ir	ntersection	Field	ing Drive to Sev	ierville	Rd					
Counties		Blour	nt							
City/Agen	ncy	City o	of Maryville							
Length		0.5	(miles))		Со	nformity Status	Exempt		
Additiona	l Details									
Programn	med Funds									
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>e</u>	Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>	
2017	PE-N/PE-D)	L-STBG		\$191,972	\$153,577	\$0	\$38,395	\$0	
2019	ROW		L-STBG		\$562,475	\$449,980	\$0	\$112,495	\$0	
2020	CON		L-STBG		\$1,165,264	\$932,211	\$0	\$233,053	\$0	
				Total	\$1,919,711	\$1,535,768	\$0	\$383,943	\$0	
Revision	Date	4/26/	2017							
Revision	Details	Adde	d to the FY2017	7-2020 ⁻	TIP to be consi	stent with Mobilit	y Plan 2040			
Previous	TIP No.									
Clyde Cit		Wi	Willow Bend I	(411) Or	Andrea Dr	Sandidge Rd	Wilder Cha	Asbury Acres		



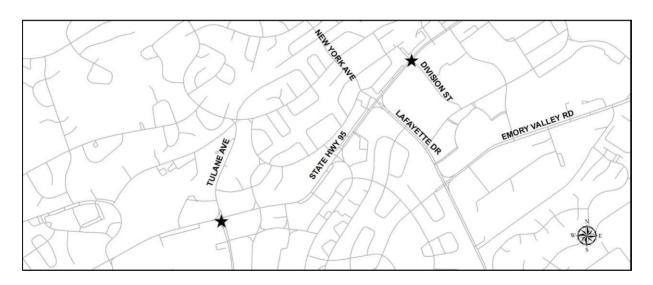
	or on the						
TIP No.	17-2017-031	Revision	No. 0	Mobility Plan N	No. 09-238		
TDOT PIN				ST	IP No.		
Project Name	Robert C. Jackson	Drive Extensi	ion				
Lead Agency	City of Maryville						
Total Project Cost	\$10,000,000						
Project Description	Construct new 2-la	ne roadway w	ith sidewal	ks.			
Termini/Intersection	Lamar Alexander F	Pkwy (US -321	I/SR-73) to	Morganton Rd			
Counties	Blount						
City/Agency	City of Maryville						
Length	1.2 (mile	es)		Co	onformity Status	Non-Exempt	
Additional Details							
Programmed Funds FY Phase 2017 PE-N/PE-D/RV	Funding T V/CN LOCAL	. \$1	0,000,000 0,000,000	Federal \$0	<u>State</u> \$0	Local \$10,000,000 \$10,000,000	<u>Other</u> \$0
Revision Date Revision Details Previous TIP No.	4/26/2017 Added to the FY20	17-2020 TIP t	to be consi	stent with Mobilit	ty Plan 2040		
Tory Dr. Alnwick Blvd	Daks D.	Southdowne L	\(\frac{1}{2}\)	avende by Estimate and State of State o	K Ave	humer St. Foothills Me	Matkins Rd

Keller

8.2.7 City of Oak Ridge Projects

Knoxville Regional Transportation Planning Organization TRANSPORTATION IMPROVEMENT PROGRAM FY 2017-2020

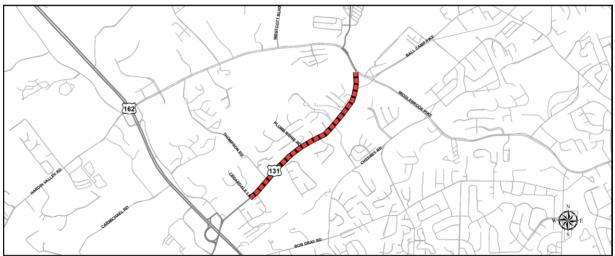
TIP No.	17-2014-081	Revision No. 1	Mobility Plan N	lo. 13-1005						
TDOT PIN	122976.00 STIP No.									
Project Name	Dak Ridge Turnpike Intersection Pedestrian Safety Improvements									
Lead Agency	City of Oak Ridge	ity of Oak Ridge								
Total Project Cost	\$560,200	560,200								
Project Description		Pedestrian safety improvements, including marked crosswalks, ramps and pedestrian indications, at wo intersections. Includes mast arm replacement, to be funded by L-STP funds.								
Termini/Intersection	Oak Ridge Turnpike at intersection	South Tulane interse	ection and Oak F	Ridge Turnpike a	t East Division/	Tennyson				
Counties	Anderson									
City/Agency	City of Oak Ridge									
Length	0.06 (miles)		Со	nformity Status	Exempt					
Additional Details										
Programmed Funds										
FY Phase	Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>				
2017 CON	L-STBG	\$72,000	\$57,600	\$0	\$14,400	\$0				
2017 PE-D/RW/C	N L-STBG-TA	\$450,000	\$360,000	\$0	\$90,000	\$0				
	-	Total \$522,000	\$417,600	\$0	\$104,400	\$0				
Revision Date	4/27/2017									
Revision Details	Adjust project by updating Mobility Plan number.									
Previous TIP No.	2014-081									



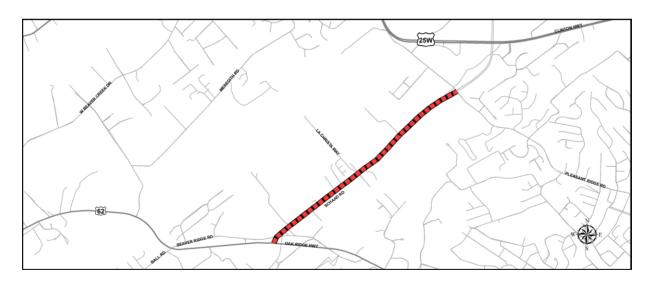
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8.2.8 Knox County Projects

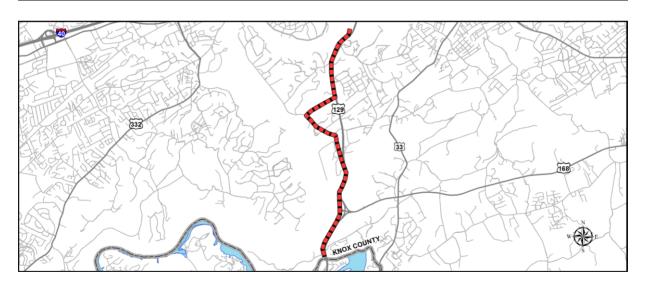
TIP No.	17-2014-002	Revision No. 0	Mobility Plan No.	. 09-637						
TDOT PIN	121508.00		STIP	No.						
Project Name	Lovell Rd. (SR-131)	Widening								
Lead Agency	Knox County									
Total Project Cost	\$14,200,000									
Project Description	Widen 2-lane to 4-la	diden 2-lane to 4-lane, including pedestrian and bicycle facilities.								
Termini/Intersection	Lovell Rd from Ceda	vell Rd from Cedardale Ln. to Middlebrook Pk. (SR-169)								
Counties	Knox	ox								
City/Agency	Knox County	ox County								
Length	1.7 (miles	.7 (miles) Conformity Status Non-Exempt								
Additional Details	\$40,000 federal L-S7	TP funds previously	obligated for this proje	ect.						
Programmed Funds										
<u>FY</u> <u>Phase</u>	Funding Typ	<u>De</u> <u>Total Fund</u>	s <u>Federal</u>	<u>State</u>	Local	Other				
2018 PE-D	L-STBG	\$500,00	\$400,000	\$100,000	\$0	\$0				
		Total \$500,00	\$400,000	\$100,000	\$0	\$0				
Revision Date										
Revision Details										
Previous TIP No.	2014-002									
		WESTCOILEUD								



TIP No		17-2	014-006	Revis	sion No.	1	Mobility Plan N	No. 09-625			
TDOT	PIN	1217	'31.00				ST	IP No.			
Project	Name	Scha	ad Rd. Widening	l							
Lead A	gency	Knox	ox County								
Total P	roject Cost	\$8,5	500,000								
Project	Description	Wide	en 2-lane to 4-lan	e							
Termin	i/Intersection	Scha	ad Rd. from Oak	Ridge	Hwy. (S	R-62) t	to Pleasant Ridg	je Rd.			
Countie	es	Knox	(
City/Ag	ency	Knox	ox County								
Length		1.5	.5 (miles) Conformity Status Non-Exempt								
Additio	nal Details										
Progra	mmed Funds										
<u>FY</u>	<u>Phase</u>		Funding Type		Total Fu	<u>ınds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>	
2017	PE-D		LOCAL		\$500	0,000	\$0	\$0	\$500,000	\$0	
2018	ROW/CON		LOCAL		\$8,000	0,000	\$0	\$0	\$8,000,000	\$0	
				Total	\$8,500	0,000	\$0	\$0	\$8,500,000	\$0	
Revisio	n Date	4/26/	4/26/2017								
Revisio	n Details	Add	\$8,000,000 of loc	al fund	s for FY	18 RO	W/CON. Update	total project co	ost to \$8,500,00	0.	
Previou	ıs TIP No.	2014	4-006								



TIP No.	17-2014-044 Revision No.	0 Mobility Plan No. 13-863							
TDOT PIN	030608.02	STIP No.							
Project Name	Knox/Blount Greenway - Phase II								
Lead Agency	nox County								
Total Project Cost	7,500,000								
Project Description	construction of an off-road trail that will connect Phase I of the Knox Blount Greenway to existing edestrian and bicycle facilities on Alcoa Highway Bridge.								
Termini/Intersection	Connect Phase I to Alcoa Highway B I.C. King Park.	onnect Phase I to Alcoa Highway Bridge over the Little River at the Blount County Line to connect to C. King Park.							
Counties	Knox								
City/Agency	Knox County								
Length	5.5 (miles)	Conformity Status	Exempt						
Additional Details									
Additional Details Programmed Funds									
	Funding Type Total Fu	unds Federal State	Local Other						
Programmed Funds	Funding Type Total Fu		<u>Local</u> <u>Other</u>						
Programmed Funds FY Phase		1,975 \$1,161,580 \$0							
Programmed Funds FY Phase	EN \$1,451	1,975 \$1,161,580 \$0	\$290,395 \$0						
Programmed Funds FY Phase 2017 CON	EN \$1,451	1,975 \$1,161,580 \$0	\$290,395 \$0						



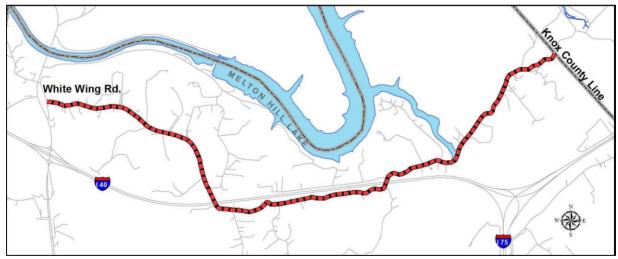
TIP No.	17-2014-229	Revision No. 1	Mobility Plan No.	13-816						
TDOT PIN	121587.00		STIP N	0.						
Project Name	Knox County Advan	nox County Advanced Traffic Management System - Phase 1								
Lead Agency	Knox County	ox County								
Total Project Cost	\$1,428,000									
Project Description		ne project is to design and implement advanced traffic management system on two priority roads - aynardville Pk and Cedar Bluff Rd.								
Termini/Intersection	Cedar Bluff Rd from Range Rd to E. Em	Sherrill Blvd to Middleb ory Rd (2.0 miles)	prook Pk (SR-169) (1	.3 miles) and	d Maynardville Pk	from Rifle				
Counties	Knox									
City/Agency	Knox County									
Length	3.3 (miles	s)	Confor	mity Status	Exempt					
Additional Details	\$223,000 federal CI	MAQ funds previously o	bligated for this proje	ect.						
Programmed Funds										
FY Phase	Funding Ty	pe <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>				
2017 CON	CMAQ	\$1,205,000	\$1,205,000	\$0	\$0	\$0				
		Total \$1,205,000	\$1,205,000	\$0	\$0	\$0				
Revision Date	4/27/2017									
Revision Details	Adjust project by up	dating Mobility Plan nur	mber.							
Previous TIP No.	2014-229									
330 61 95	61 25W		75 (441) 75 (641)	331)	11W	40				

TIP No.	17-2017-030	Revision No.	0	Mobility Plan No	o. 09-605		
TDOT PIN				STIF	No.		
Project Name	Schaad Rd Extension	on	<u> </u>				
Lead Agency	Knox County						
Total Project Cost	\$27,591,408						
Project Description	Construct new 4-lan	ne roadway with sic	dewalks	3			
Termini/Intersection	Middlebrook Pk (SR	169) to W of Oak	Ridge	Hwy (SR 62)			
Counties	Knox						
City/Agency							
Length	4.6 (miles	3)		Con	formity Status	Non-Exempt	
Additional Details							
Programmed Funds							
<u>FY</u> <u>Phase</u>	Funding Ty	pe <u>Total Fun</u>	<u>ıds</u>	<u>Federal</u>	<u>State</u>	Local	Other
2017 CON	LOCAL	\$26,000,0	000	\$0	\$0	\$26,000,000	\$0
		Total \$26,000,0	000	\$0	\$0	\$26,000,000	\$0
Revision Date	4/26/2017						
Revision Details	Added to the FY201	7-2020 TIP to be	consist	ent with Mobility	Plan 2040		
Previous TIP No.							
OAK RIDGE HV	VY 62					/	
/	/					++++	RMILERS I RD
/			CHAAD	RD	***************************************		CAST
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1	CAMP PIKE						N
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8.2.9 Loudon County Projects

TIP No.	17-2014-019	Revision No.	0	Mobility Plan No	. 13-403		
TDOT PIN	120807.00			STIP	No.		
Project Name	Tellico Pkwy. / Hwy.	72 Intersection L	ighting	J			
Lead Agency	Loudon County						
Total Project Cost	\$82,500						
Project Description	Construction of 5 to transformer and lum		along	1500 feet. Installa	tion of aluminu	um poles, condu	uit, wiring,
Termini/Intersection	Intersection of Tellic	o Pkwy (SR-444)	and H	wy 72 (SR-72)			
Counties	Loudon						
City/Agency	Loudon County						
Length	0.28 (miles)		Conf	ormity Status	Exempt	
Additional Details							
Programmed Funds							
FY Phase	Funding Typ	<u>oe</u> <u>Total Fu</u>	<u>nds</u>	<u>Federal</u>	<u>State</u>	Local	Other
2017 CON	L-STBG	\$73	,100	\$73,100	\$0	\$0	\$0
		Total \$73	,100	\$73,100	\$0	\$0	\$0
Revision Date							
Revision Details							
Previous TIP No.	2014-019						
Fc		Clare Hay	3			3	

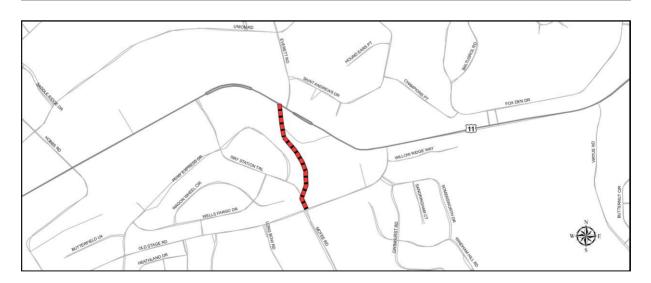
TIP No.	17-2014-076	Revi	sion No. 1	Mobility Plan No). 17-411						
TDOT PIN	123143.00			STIP	No.						
Project Name	Buttermilk Road Res	surfacing	1	J							
Lead Agency	Loudon County										
Total Project Cost	\$795,000										
Project Description	Resurface existing remarkings, and reflect					itions, worn trave	el lane				
Termini/Intersection	Buttermilk Road from	ttermilk Road from White Wing Road to Knox County line.									
Counties	Loudon	udon									
City/Agency	Loudon County	udon County									
Length	5.2 (miles	s)		Cont	formity Status	Exempt					
Additional Details											
Programmed Funds											
<u>FY</u> <u>Phase</u>	Funding Typ	<u>oe</u>	Total Funds	<u>Federal</u>	<u>State</u>	Local	Other				
2017 PE-D/RW/C	N L-STBG		\$790,000	\$632,000	\$0	\$158,000	\$0				
		Total	\$790,000	\$632,000	\$0	\$158,000	\$0				
Revision Date	4/27/2017										
Revision Details	Adjust project by up	dating M	obility Plan nur	nber.							
Previous TIP No.	2014-076	·	-	-	·						



TIP No.	17-2017-004	Revision N	lo. 0	Mobility Plan No.	17-417					
TDOT PIN				STIP	No.					
Project Name	J. Carmichael Gree	r Pedestrian Br	idge							
Lead Agency	Loudon County									
Total Project Cost	\$2,500,000									
Project Description	Conversion of exist bicycle shared use		cle bridge	e and approaches a	nt Fort Loudou	ın Dam to a ped	estrian and			
Termini/Intersection	City Park Drive to T	ellico Parkway/	/Highway	444						
Counties	Loudon	Loudon								
City/Agency							-			
Length	1.44 (mile	s)		Confo	ormity Status	Exempt				
Additional Details										
Programmed Funds										
<u>FY</u> <u>Phase</u>	Funding Ty	<u>/pe Total</u>	<u>Funds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	Other			
2018 PE-N/PE-D/RV	V/CN L-STBG	\$2,5	500,000	\$2,000,000	\$0	\$500,000	\$0			
		Total \$2,5	500,000	\$2,000,000	\$0	\$500,000	\$0			
Revision Date	4/26/2017									
Revision Details	Added to the FY20	17-2020 TIP to	be consi	stent with Mobility I	Plan 2040					
Previous TIP No.										
V- (0)										
Adhe To S	Book St. Ash Ash St. Sell Ferry J		City Park C			Ha	Lakeside Dr			
Hale Ave	rans Ln Q	ig .		Unnamed Street		Sal One Scanic	W N E			

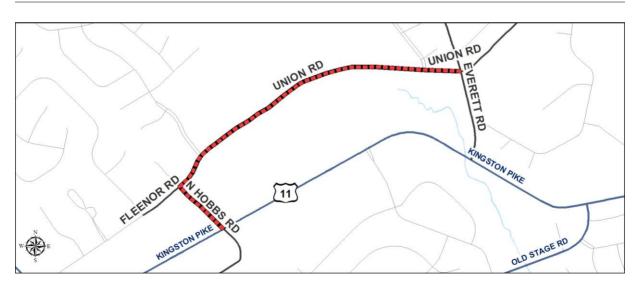
8.2.10 Town of Farragut Projects

TIP No	•	17-2	17-2014-024 Revision No. 1 Mobility Plan No. 13-1001									
TDOT I	PIN	1217	26.00			ST	IP No.					
Project	Name	Old S	Stage Rd. / Kingsto	n Pk	. Greenway Co	nnector						
Lead A	gency	Towr	n of Farragut									
Total P	roject Cost	\$550	,000									
Project	Description	the e	Construction of an 8 foot asphalt greenway from the north side of Kingston Pk. near Everett Rd., under the existing Kingston Pk. bridge over Little Turkey Creek to Way Station Trail, just north of its terminus near Old Stage Rd.									
Termin	i/Intersection	King	ingston Pk Greenway; from Old Stage Rd.to near Everett Rd.									
Countie	es	Knox	nox									
City/Ag	ency	Town	Town of Farragut									
Length		0.4 (miles) Conformity Status Exempt										
Additio	nal Details	\$6,4	00 federal L-STP fo	unds	previously oblig	ated for this pro	ject.					
Prograi	mmed Funds											
<u>FY</u>	<u>Phase</u>		Funding Type		Total Funds	<u>Federal</u>	<u>State</u>	Local	Other			
2017	PE-D		L-STBG		\$32,000	\$25,600	\$0	\$6,400	\$0			
2018	ROW		L-STBG		\$290,000	\$232,000	\$0	\$58,000	\$0			
2019	CON		L-STBG		\$220,000	\$176,000	\$0	\$44,000	\$0			
			Т	otal	\$542,000	\$433,600	\$0	\$108,400	\$0			
Revisio	n Date	4/27/	/2017									
Revisio	n Details	Adju	st project by updat	ing N	lobility Plan nun	nber.						
Previou	ıs TIP No.	2014	2014-024									



TIP No.	17-2014-010	Revision No. 0	Mobility Plan N	o. 13-834							
TDOT PIN	106915.00		STII	P No.							
Project Name	Kingston Pk. Sidew	valk in Farragut									
Lead Agency	Town of Farragut										
Total Project Cost	\$1,162,500										
Project Description	Construction of 2,09 Stage Road and Vi	50 linear feet of sidew rtue Road	alk along south side	e of Kingston Pik	(e (SR-1) betwee	n Old					
Termini/Intersection	Old Stage Rd to Vir	rtue Rd									
Counties	Knox										
City/Agency	Town of Farragut										
Length	0.4 (mile	0.4 (miles) Conformity Status Exempt									
Additional Details	Conformity Status:	Exempt under 40 CFF	R 93.126								
Programmed Funds											
<u>FY</u> <u>Phase</u>	Funding Ty	ype <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>					
2017 CON	L-STBG	\$700,000	\$560,000	\$0	\$140,000	\$0					
		Total \$700,000	\$560,000	\$0	\$140,000	\$0					
Revision Date											
Revision Details											
Previous TIP No.	2008-140, 2011-01	0, 2014-010									
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TIP No.	17-2	014-082	Revision No. 2	Mobility Plan N	lo. 13-601							
TDOT PIN	1250	45.00		STI	P No.							
Project Name	Unio	n Road/N. Hobbs F	Road Improvements									
Lead Agency	Tow	n of Farragut										
Total Project Cost	\$4,7	46,000										
Project Description	Reco	onstruct 2-lane road	d with addition of turn	n lanes and bicy	cle/pedestrian fa	acilities.						
Termini/Intersection		Inion Road from N. Hobbs Road to Everett Road (approx. 4,500 ft); I. Hobbs Road from Kingston Pike (SR-1) to Union Road (approx. 750 ft)										
Counties	Knox	ox										
City/Agency	Tow	own of Farragut										
Length	1	1 (miles) Conformity Status Exempt										
Additional Details												
Programmed Funds												
<u>FY</u> <u>Phase</u>		Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>					
2017 PE-N/PE-I)	L-STBG	\$480,000	\$384,000	\$0	\$96,000	\$0					
2018 ROW		L-STBG	\$500,000	\$400,000	\$0	\$100,000	\$0					
2019 CON		L-STBG	\$3,520,000	\$2,816,000	\$0	\$704,000	\$0					
		Т	otal \$4,500,000	\$3,600,000	\$0	\$900,000	\$0					
Revision Date	4/26	/2017										
Revision Details	Add \$500,000 (\$400,000 federal/\$100,000 local) L-STBG to FY2018 ROW and add \$3,520,000 (\$2,816,000 federal;/\$704,000 local) L-STBG to FY2019 CON. Update project description to match Mobility Plan 2040.											
Previous TIP No.	P No. 2014-082											



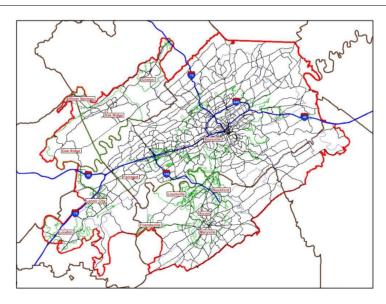
TIP No.	17-2014-231	Revision	n No. 1	Mobility Plan I	No. 13-813							
TDOT PIN	121728.00			ST	TP No.							
Project Name	Farragut Traffic Sign	al Improver	nent Proje	ct								
Lead Agency	Town of Farragut											
Total Project Cost	\$258,000											
Project Description	The project will provi				ructure improven	nents to facilitat	e signal					
Termini/Intersection												
Counties	Knox											
City/Agency	Town of Farragut	Fown of Farragut										
Length	(miles)		Co	onformity Status	Exempt						
Additional Details	\$65,000 federal CM	AQ funds pr	eviously of	oligated for this p	roject.							
Programmed Funds												
FY Phase	Funding Typ	<u>oe</u> <u>To</u>	otal Funds	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>					
2017 PE-N/PE-D/RV	V/CN CMAQ		\$193,000	\$193,000	\$0	\$0	\$0					
		Total	\$193,000	\$193,000	\$0	\$0	\$0					
Revision Date	4/27/2017											
Revision Details	Adjust project by upo	dating Mobil	ity Plan nu	mber.								
Previous TIP No.	2014-231											
ENERGIT RO NAMATT RI	40			711	PARKSIDE DR	KINGSTON PA						

					1							
TIP No		17-20	017-024	Revision No. 0	Mobility Plan N	No. 13-813						
TDOT	PIN	1254	62.00		ST	IP No.						
Project	Name	Town	of Farragut Advan	ced Traffic Manage	ment System Pl	hase 1						
Lead A	gency	Town	of Farragut									
Total P	roject Cost	\$2,92	25,000									
Project	Description	Upgrade Farragut's closed loop signal system to a centrally controlled signal system. The limits of the project includes all 26 signals in Farragut's signal system on Kingston Pike, Campbell Station Road, Concord Road, and Parkside Drive. The upgrades include new central traffic signal control software, new signal series controllers, ethernet communication upgrades, bringing pedestrian infrastructure up to current PROWAG standards, cabinet upgrades, detection upgrades, and replacing span wire signals at five intersections with mast arms.										
Termin	i/Intersection	Vario	arious									
Countie	es	Knox	Knox									
City/Ag	jency	Town of Farragut										
Length			(miles)		Со	onformity Status	Exempt					
Additio	nal Details											
Prograi	mmed Funds											
<u>FY</u>	<u>Phase</u>		Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	Local	Other				
2017	PE-N/PE-D)	CMAQ	\$165,000	\$165,000	\$0	\$0	\$0				
2018	PE-N/PE-D)	CMAQ	\$75,000	\$75,000	\$0	\$0	\$0				
2019	CON		CMAQ	\$2,685,000	\$2,685,000	\$0	\$0	\$0				
			To	stal \$2,925,000	\$2,925,000	\$0	\$0	\$0				
Revisio	on Date	1/12/	2017									
Revisio	on Details	Adde	d to the TIP									
Previou	us TIP No.											

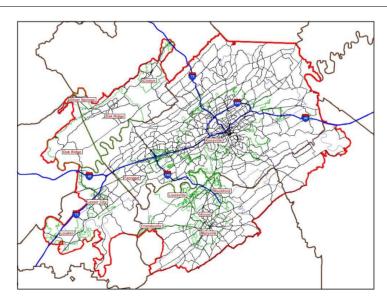


8.2.11 TPO/MPC Projects

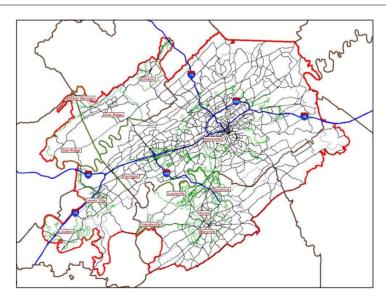
TIP No.	17-2014-207	Revision No. 1	Mobility Plan No	c. Consistent v	vith Mobility Plan	Goal 2						
TDOT PIN	106867.01		STIF	No.								
Project Name	Smart Trips - Compr	ehensive Program										
Lead Agency	TPO/MPC											
Total Project Cost	\$589,250	589,250										
Project Description		Coordinator works with businesses to assist them in developing or expanding worksite commute options, programs, and other incentives.										
Termini/Intersection	TPO Planning Area	PO Planning Area										
Counties	Knox	nox										
City/Agency												
Length	(miles	(miles) Conformity Status Exempt										
Additional Details	The operations fundabligated for this pro		hare operation. \$319,	400 federal CN	MAQ funds previo	ously						
Programmed Funds												
FY Phase	Funding Typ	<u>e Total Fund</u>	ls <u>Federal</u>	<u>State</u>	Local	<u>Other</u>						
2017 OPER	CMAQ	\$190,0	00 \$152,000	\$0	\$38,000	\$0						
		Total \$190,0	\$152,000	\$0	\$38,000	\$0						
Revision Date	4/27/2017											
Revision Details	Adjust project by updating Mobility Plan Goal number.											
Previous TIP No.	2014-207	2014-207										



TIP No.		17-20)14-225	Revis	sion No.	1	Mobility Plan N	lo. Consistent	with Mobility Plan	n Goal 2		
TDOT P	PIN					•	STI	P No.				
Project	Name	Bike	Parking Program	า								
Lead Ag	gency	TPO/	MPC									
Total Pr	oject Cost	\$20,0	000									
Project	Description		de convenient a ovide bike parkin					reducing cost f	or businesses ar	nd agencies		
Termini	Intersection											
Countie	s	TPO	O Area									
City/Age	ency											
Length			(miles) Conformity Status Exempt									
Addition	nal Details											
Program	nmed Funds											
<u>FY</u>	<u>Phase</u>		Funding Type	<u>2</u>	Total Fu	<u>unds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>		
2017	PUR		CMAQ		\$10	0,000	\$8,000	\$0	\$2,000	\$0		
2018	PUR		CMAQ		\$10	0,000	\$8,000	\$0	\$2,000	\$0		
				Total	\$20	0,000	\$16,000	\$0	\$4,000	\$0		
Revision	n Date	4/28/	2017									
Revision	n Details	Adjus	st project by upd	ating M	obility P	lan Go	al number.					
Previous	s TIP No.	2011-216, 2014-225										



TIP No		17-20	017-209	Rev	ision No.	. 0	Mobility Plan N	No. Consistent	with Mobility Pla	n Principle 3		
TDOT I	PIN	1254	53.00				ST	IP No.				
Project	Name	Sma	rt Trips - Ridesh	naring F	rogram							
Lead A	gency	TPO	/MPC									
Total P	roject Cost	\$494	,000									
Project	Description	Continuation of Smart Trips program that encourages alternatives to driving alone through an online ridematching and logging database, incentives, marketing and outreach. Operations funds are used for rideshare operations.										
Termin	i/Intersection	TPO	PO Planning Area									
Countie	es	TPO	PO Area									
City/Ag	ency											
Length		0	0 (miles) Conformity Status Exempt									
Additio	nal Details											
Prograi	mmed Funds											
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>oe</u>	Total F	<u>unds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	Other		
2018	OPER		CMAQ		\$160	0,000	\$160,000	\$0	\$0	\$0		
2019	OPER		CMAQ		\$16	5,000	\$165,000	\$0	\$0	\$0		
2020	OPER		CMAQ		\$169	9,000	\$169,000	\$0	\$0	\$0		
				Total	\$494	4,000	\$494,000	\$0	\$0	\$0		
Revisio	n Date	1/12/	2017									
Revisio	n Details	Adde	ed to the TIP									
Previou	ıs TIP No.	No.										



8.2.12 TPO Groupings

TIP No).	17-2017	-305	Revision No.	2	Mobility Plan No	. Consistent v	vith Mobility Plar	n Goal 2				
TDOT	PIN					STIP	No.						
Project	Name	STBG T	ransportation /	Alternatives (S	TBG-T	A) Grouping							
Lead A	gency	Various											
Total F	Project Cost	\$6,893,3	355										
				1									
Project	t Description	funding pedestri transpor recreation and other	for programs a an and bicycle tation and enh onal trail progra	and projects de facilities, infra anced mobility am projects; an rgely in the rigl	fined a structu , comm nd proje	6 - transportation a s transportation al re projects for imp nunity improvement ects for the planning ay of former Inters	ternatives, incorondring non-dri not activities, arong, design or c	lluding on- and o ver access to pund environmenta construction of bo	ff-road Iblic I mitigation; oulevards				
Termin	i/Intersection												
Counti	es	TPO Are	ea										
City/Ag	gency												
Length			(miles) Conformity Status Exempt										
Additio	nal Details												
Progra	mmed Funds												
<u>FY</u>	<u>Phase</u>		Funding Type	Total Fu	<u>unds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>				
2017	CON		S-STBG-TA	\$2,545	5,916	\$2,036,733	\$0	\$509,183	\$0				
2017	PE-N/PE-D/RV		L-STBG-TA	\$2,083	3,631	\$1,666,904	\$0	\$416,727	\$0				
2018	PE-N/PE-D/RV		L-STBG-TA	\$351	1,838	\$281,470	\$0	\$70,368	\$0				
2019	PE-N/PE-D/RV		L-STBG-TA		5,985	\$764,788	\$0	\$191,197	\$0				
2020	PE-N/PE-D/RV	V/CN	L-STBG-TA	\$955	5,985	\$764,788	\$0	\$191,197	\$0				
				Total \$6,893	3,355	\$5,514,683	\$0	\$1,378,672	\$0				
Revisio	on Date	4/26/201	17										
Revisio	on Details	removin	g this project f	rom the groupi	ng, L-S	/ Streetscape from TBG-TA for FY20 120,830 local) L-S	18 PE-N/PE-D	D/ROW/CON wa	s reduced in				
Previo	us TIP No.												

Grantee	Project Name	Fund Ty	pe FY	Federal Funds	
City of Oak Ridge	Rails to Trails	L-TAP	2017	\$942,530	
City of Oak Ridge	Rails to Trails	L-TAP	2018	\$281,470	
City of Knoxville	First Creek GreenwayEdgewood Park and Environs	L-TAP	2017	\$280,000	
City of Knoxville	Second Creek Greenway	L-TAP	2017	\$444,374	
City of Alcoa	Alcoa Sidewalk/Greenway Extension	S-TAP	2017	\$721,212	
City of Alcoa	Duck Pond Walking and Bike Path	S-TAP	2017	\$1,315,521	

TIP No).	17-2	017-306	Rev	rision No.	0	Mobility Plan N	No. Co	nsistent v	vith Mobility Pla	n Goal 1
TDOT	PIN						ST	IP No.			
Project	Name	Plan	ning and Studie	s Group	oing						
Lead A	gency	Vario	ous								
Total P	Project Cost	\$1,50	00,000								
Project	Description	This area		used to	o fund pla	nning	reports and stud	dies thro	oughout t	he Knoxville TP	O planning
Termin	i/Intersection										
Counties TPO Area											
City/Agency											
Length		(miles) Conformity Status Exempt									
Additio	nal Details										
Progra	mmed Funds										
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>oe</u>	Total Fu	<u>nds</u>	<u>Federal</u>	<u>s</u>	<u>tate</u>	Local	<u>Other</u>
2017	PLN		L-STBG		\$450	,000	\$360,000		\$0	\$90,000	\$0
2018	PLN		L-STBG		\$400	,000	\$320,000		\$0	\$80,000	\$0
2019	PLN		L-STBG		\$650	,000	\$520,000		\$0	\$130,000	\$0
				Total	\$1,500	,000	\$1,200,000		\$0	\$300,000	\$0
Revisio	on Date	4/26/	2017								
Revision	on Details	Adde	ed to the FY201	7-2020	TIP to be	consi	stent with Mobilit	ty Plan	2040		
Previous TIP No.											

Project Description	Fund Type	FY	Phase	Federal Funds
Asheville Hwy/Magnolia Ave/Rutledge Pk Intersection Study	L-STBG	2018	PLN	\$200,000
Safer and Complete Streets Study	L-STBG	2019	PLN	\$200,000
Chapman Hwy Planning Study	L-STBG	2017	PLN	\$200,000
Knoxville Center Mall Area Circulation Study	L-STBG	2019	PLN	\$200,000
Sidewalk Strategic Study	L-STBG	2017	PLN	\$160,000
Knox County Greenway Study	L-STBG	2018	PLN	\$120,000
Knox County Greenway Study	L-STBG	2019	PLN	\$120,000

TIP N	0.	17-20	17-307	Rev	ision No. 0	Mobility Plan No	o. Consistent v	with Mobility Plan	Goal 1
TDOT	PIN					STIF	No.		
Projec	t Name	Maint	enance and Rep	air Gr	ouping				
Lead /	Agency	Vario	JS						
Total I	Project Cost	\$1,39	8,448						
Projec	t Description	Funds	s will be used fo	r opera	ation, maintenar	nce, repair, or res	ufacing works.		
Termini/Intersection									
Counties TPO Area									
City/Agency									
Length	n	(miles) Conformity Status Exempt							
Additio	onal Details								
Progra	ammed Funds								
<u>FY</u>	<u>Phase</u>		Funding Type	<u>!</u>	Total Funds	<u>Federal</u>	<u>State</u>	Local	Other
2017	PE-N/PE-D/RV	V/CN	L-STBG		\$1,228,448	\$974,064	\$0	\$254,384	\$0
2019	PE-N/PE-D/RV	V/CN	L-STBG		\$170,000	\$136,000	\$0	\$34,000	\$0
				Total	\$1,398,448	\$1,110,064	\$0	\$288,384	\$0
Revisi	on Date	4/26/2	2017						
Revisi	on Details	Adde	d to the FY2017	-2020	TIP to be consi	stent with Mobility	Plan 2040		
Previo	ous TIP No.								

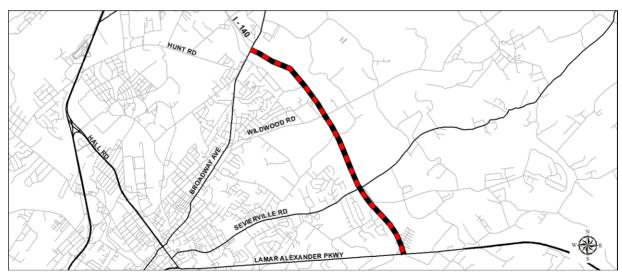
Grantee	Project Description	Fund Type	FY	Phase	Federal Funds
	Highland Avenue Resurfacing & Repair Existing				
City of Loudon	Sidewalk Project	L-STBG	2019	PE-N/PE-D/ROW/CON	\$136,000
Loudon County	Loudon Resurfacing	L-STBG	2017	PE-N/PE-D/ROW/CON	\$974,064

TIP No).	17-20	17-308	Rev	vision No.	0	Mobility Plan I	No. Cor	nsistent v	vith Mobility Pla	n Goal 2
TDOT	PIN						ST	TP No.			
Project	Name	Bike a	and Pedestria	n Group	ing						
Lead A	gency	Vario	us								
Total F	Project Cost	\$3,18	2,500								
Project Description This grouping will be used to fund greenways, sidewalks, bicycle facilities and amenities, streetscaping, etc. throughout the Knoxville TPO area.								treetscaping,			
Termin	Termini/Intersection										
Counti	es	TPO Area									
City/A	gency										
Length			(mile	s)			Co	onformit	y Status	Exempt	
Additio	nal Details										
Progra	mmed Funds										
<u>FY</u>	<u>Phase</u>		Funding Ty	<u>pe</u>	Total Fu	<u>nds</u>	<u>Federal</u>	<u>S1</u>	ate	Local	Other
2018	PE-N/PE-D/RW	//CN	L-STBG		\$1,100	,000	\$880,000		\$0	\$220,000	\$0
2019	PE-N/PE-D/RW	//CN	L-STBG		\$625	,000	\$500,000		\$0	\$125,000	\$0
2020	PE-N/PE-D/RW	//CN	L-STBG		\$1,457	,500	\$1,166,000		\$0	\$291,500	\$0
				Total	\$3,182	,500	\$2,546,000		\$0	\$636,500	\$0
Revision	on Date	4/26/2	2017								
Revision	on Details	Adde	d to the FY20	7-2020	TIP to be	consis	stent with Mobili	ty Plan :	2040	·	·
Previous TIP No.											

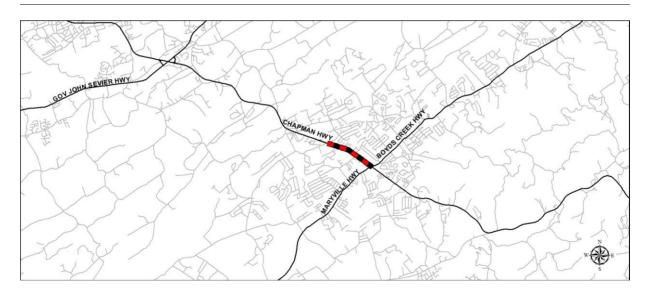
Project Description	Fund Type	FY	Phase	Federal Funds
Tyson Fort Sanders Bike Connection	L-STBG	2019	PE-N/PE-D	\$500,000
South Waterfront Greenway - East of Suttree	L-STBG	2020	PE-N/PE-D	\$368,000
Atlantic Avenue Sidewalk	L-STBG	2018	PE-N/PE-D/ROW/CON	\$880,000
Tazewell Pike Sidewalk	L-STBG	2020	PE-N/PE-D/ROW/CON	\$798,000

8.3 TDOT Projects

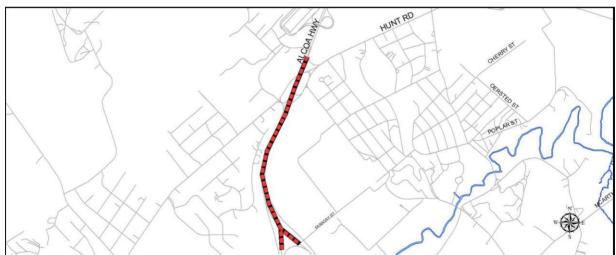
TIP No.	17-2014-025	Revision No. 0	Mobility Plan N	o. 09-232					
TDOT PIN	101423.00		STII	P No. 1705040					
Project Name	Pellissippi Pkwy. (Sl	R-162) Extension							
Lead Agency	TDOT								
Total Project Cost	\$63,549,200								
Project Description	HPP #TN053 (Section	on 1602-TEA21). Cons	struct new 4 lane.						
Termini/Intersection	Old Knoxville Hwy (SR-33) to SR-73 (US-3	21)						
Counties									
City/Agency Alcoa									
Length	4.4 (miles) Conformity Status Non-Exempt								
Additional Details	The construction fur	nds are for staged cons	truction.						
Programmed Funds									
FY Phase	Funding Typ	<u>Total Funds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>			
2019 ROW	HPP	\$10,090,162	\$8,072,130	\$2,018,032	\$0	\$0			
2020 CON	NHPP	\$37,300,000	\$29,840,000	\$7,460,000	\$0	\$0			
		Total \$47,390,162	\$37,912,130	\$9,478,032	\$0	\$0			
Revision Date									
Revision Details									
Previous TIP No.	Previous TIP No. 2002-030, 2004-020, 2006-017, 2008-039, 2011-025, 2014-025								



TIP No.	17-2014-033	Revision	No. 1	Mobility Plan I	No. 09-508							
TDOT PIN	104959.01			ST	TP No. 1778028	}						
Project Name	Chapman Hwy. (SR	-71) Improve	ments									
Lead Agency	TDOT											
Total Project Cost	\$24,700,000											
Project Description	HPP #1004 (TN123). Widen 4 I	ane to 5 la	ne with curb and	d gutter.							
Termini/Intersection	SR-35 and SR-338	o Macon Ln										
Counties	Sevier											
City/Agency	Sevier County											
Length	1.2 (miles	s)		Co	onformity Status	Non-Exempt						
Additional Details												
Programmed Funds												
FY Phase	Funding Typ	<u>To</u>	tal Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>					
2017 CON	NHPP	\$1	5,300,000	\$12,240,000	\$3,060,000	\$0	\$0					
		Total \$1	5,300,000	\$12,240,000	\$3,060,000	\$0	\$0					
Revision Date	7/26/2017											
Revision Details	Amend project to add \$6,100,000 (\$4,880,000 federal/\$1,220,000 state) of NHPP to FY2017 for construction. The construction cost has been increased as per the detailed estimate that was recently received. The original total project cost was incorrect on the TIP page. Therefore, the amended total project cost reflects the error correction and additional funds. The project is still to be let to contract by TDOT.											
Previous TIP No.	2006-145, 2008-046	006-145, 2008-046, 2011-035, 2014-033										

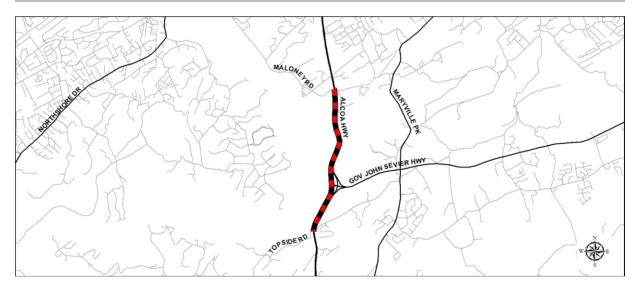


TIP No.	17-2014-005	Revision N	lo. 0	Mobility Plan No	. 09-218		
TDOT PIN	101651.01			STIP	No. 1705020)	
Project Name	Relocated Alcoa Hw	y. (SR-115 / U	IS-129)				
Lead Agency	TDOT						
Total Project Cost	\$63,129,000						
Project Description	Widen SR-115 from 115 and reconstruct			ity to a six lane di	vided facility, e	extend Tyson Blvd	under SR-
Termini/Intersection	Hall Rd (SR-35) to p	roposed interd	hange at	Tyson Blvd.			
Counties	Blount						
City/Agency	Alcoa						
Length	1.3 (miles)		Conf	ormity Status	Non-Exempt	
Additional Details							
Programmed Funds							
<u>FY</u> <u>Phase</u>	Funding Typ	<u>e Total</u>	Funds	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>
2018 CON	NHPP	\$35,0	000,000	\$28,000,000	\$7,000,000	\$0	\$0
		Total \$35,	000,000	\$28,000,000	\$7,000,000	\$0	\$0
Revision Date							
Revision Details							
Previous TIP No.	2002-001, 2004-005	, 2006-001, 20	008-004, 2	2011-005, 2014-00	05		
		X	N COA HIMO	HUNT	RO	the party at	



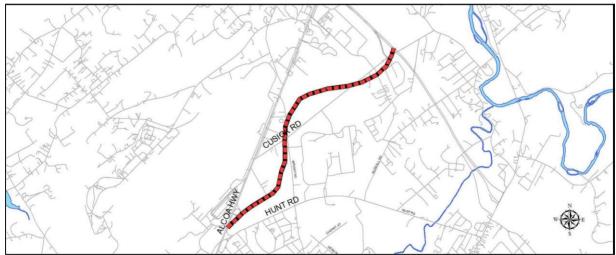
TIP No.	17-2014-003 Revision No. 0 Mobility Plan No. 09-216
TDOT PIN	100241.01 STIP No. 1705025
Project Name	Alcoa Hwy. (SR-115 / US-129)
Lead Agency	TDOT
Total Project Cost	\$81,000,000
Project Description	Reconstruct from 4 to 6 lanes with 2 auxiliary lanes between Singleton Station Rd and Topside Rd (SR 333).
Termini/Intersection	Pellissippi Pwy to Little River (Knox/Blount C.L.)
Counties	Blount
City/Agency	Alcoa
Length	3.2 (miles) Conformity Status Non-Exempt
Additional Details	Adjusted in 11/08 from 2010 to 2011.
Programmed Funds	
<u>FY</u> <u>Phase</u>	Funding Type Total Funds Federal State Local Other
2017 ROW	NHPP \$32,200,000 \$25,760,000 \$6,440,000 \$0 \$0
	Total \$32,200,000 \$25,760,000 \$6,440,000 \$0 \$0
Revision Date	
Revision Details	
Previous TIP No.	2008-002, 2011-003, 2014-003
XXX	OP SIDE RO
	\$ 844

TIP No).	17-20	2014-004 Revision No. 2 Mobility Plan No. 09-628									
TDOT	PIN	1002	41.02			STI	P No.	1747080				
Project	t Name	Alcoa	a Hwy. (SR-115	/ US-12	:9)							
Lead A	Agency	TDO	Т									
Total F	Project Cost	\$46,4	128,000									
Projec	t Description	Wide	n from 4 to 6 la	nes, incl	luding pedestria	an and bicycle fa	cilities.					
Termin	ni/Intersection	North	of Little River	(Knox/BI	ount C.L.) to M	aloney Rd						
Counti	es	Knox										
City/Agency Knoxville												
Length	1	3 (miles) Conformity Status Non-Exempt										
Additio	onal Details	Adju	sted ROW in 11	/08 from	2010 to 2011.							
Progra	mmed Funds											
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>oe</u>	Total Funds	<u>Federal</u>	<u>s</u>	tate	Local	<u>Other</u>		
2017	ROW		NHPP		\$5,428,000	\$4,342,400	\$1,0	085,600	\$0	\$0		
2018	CON		NHPP		\$39,000,000	\$31,200,000	\$7,8	300,000	\$0	\$0		
				Total	\$44,428,000	\$35,542,400	\$8,8	385,600	\$0	\$0		
Revision	on Date	5/30/	2017									
Revision	on Details	Add :	\$540,000 (\$432	,000 fed	leral/\$108,000	state) of NHPP fu	unds to	FY 2017	ROW phase.			
Previous TIP No. 2004-033, 2006-002, 2008-003, 2011-004, 2014-004												



17-2014-034	Revision No. 0	Mobility Plan No. 09	9-410					
115209.00		STIP No.	1753010					
SR-73 / US-321 at 5	SR-2 / US-11							
TDOT								
\$17,405,000								
Intersection improve	ments							
Intersection of SR-7	3 (US-321) and SR-2 (US-11)						
Loudon								
Lenoir City	enoir City							
0.13 (miles	0.13 (miles) Conformity Status Exempt							
Funding Tyr	pe <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>			
NHPP	\$6,500,000	\$5,200,000 \$1	,300,000	\$0	\$0			
	Total \$6,500,000	\$5,200,000 \$1	,300,000	\$0	\$0			
2006-020, 2008-047	, 2011-036, 2014-034							
	115209.00 SR-73 / US-321 at S TDOT \$17,405,000 Intersection improve Intersection of SR-73 Loudon Lenoir City 0.13 (miles Funding Typ NHPP	115209.00	STIP No.	STIP No. 1753010	STIP No. 1753010			

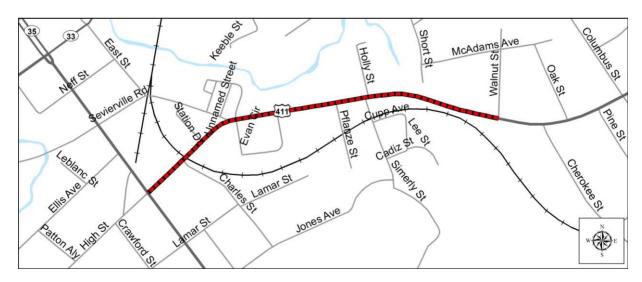
TIP No.	17-2014-035	Revision No. 0	Mobility Plan No. 09	9-257						
TDOT PIN	101651.02		STIP No.	. 1705021						
Project Name	SR 115 / US 129 (R	Relocated Alcoa Hwy.)								
Lead Agency	TDOT									
Total Project Cost	\$74,530,884									
Project Description	New alignment, fou	r lane divided facility, c	onstruct an interchange	at Pelliss	ippi Parkway (SR	162)				
Termini/Intersection	Proposed interchan	ge at Tyson Blvd. to Pe	ellissippi Pkwy (SR-162	.)						
Counties	Blount									
City/Agency	Blount County									
Length	2.9 (miles	s)	Conform	nity Status	Non-Exempt					
Additional Details										
Programmed Funds										
<u>FY</u> <u>Phase</u>	Funding Ty	<u>/pe</u> <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	Local	Other				
2017 ROW	NHPP	\$24,030,884	\$19,224,707	4,806,177	\$0	\$0				
		Total \$24,030,884	\$19,224,707 \$4	4,806,177	\$0	\$0				
Revision Date										
Revision Details					-					
Previous TIP No.	2008-152, 2011-037	7, 2014-035								
						N. Committee of the com				



TIP No.	17-2014-058 Revision No. 1	Mobility Plan No. 09-632							
TDOT PIN	107777.00	STIP No.							
Project Name	Concord Rd.								
Lead Agency	TDOT								
Total Project Cost	\$14,708,140								
Project Description	Widen 2-lanes to 4-lanes including pede turn lane at Turkey Creek Rd.								
Termini/Intersection	Concord Rd (SR-332) from north of Turk	ey Creek Rd. to Northshore Dr.							
Counties	nox								
City/Agency	Town of Farragut								
Length	0.93 (miles) Conformity Status Non-Exempt								
Additional Details	\$6,084,000 federal L-STP funds previou	sly obligated for this project.							
Programmed Funds									
<u>FY</u> <u>Phase</u>	Funding Type Total Funds	Federal State Local Other							
2017 CON	L-STBG \$8,508,14	\$6,806,512 \$1,701,628 \$0 \$0							
	Total \$8,508,14	0 \$6,806,512 \$1,701,628 \$0 \$0							
Revision Date	5/22/2017								
Revision Details	pdate termini, length, and map to include the addition of the southbound right turn lane. The revised rmini are "Concord Rd (SR-332) from north of Turkey Creek Rd. to Northshore Dr." and revised length								
	is 0.93 miles. The ROW funds have bee								

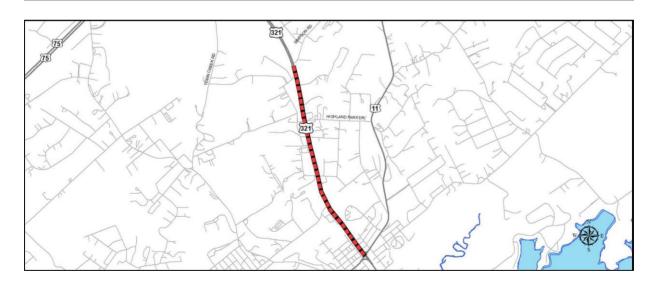


TIP No.		17-2	17-2014-059 Revision No.				Mobility Plan No. 09-214				
TDOT F	PIN	1136	608.00				STI	IP No.			
Project	Name	Sevi	erville Rd.								
Lead A	gency	TDO	Т								
Total P	roject Cost	\$9,5	00,000								
Project	Description	Reconstruct Sevierville Rd. (SR-35) from two lanes to three lanes, curb and gutter, and sidewalks with intersection improvements.									
Termini	/Intersection	Sevi	erville Rd (US-4	11/SR-	35) from W	ashir	ngton St. to Walr	nut St.			
Countie	es	Blou	Blount								
City/Ag	ency	City of Maryville									
Length		0.4 (miles) Conformity Status Non-Exempt									
Addition	nal Details										
Progran	nmed Funds										
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>oe</u>	Total Fund	<u>ds</u>	<u>Federal</u>	<u>State</u>	Local	Other	
2017	PE-N/PE-D)	L-STBG		\$800,0	000	\$640,000	\$160,000	\$0	\$0	
2018	ROW		L-STBG		\$3,700,0		\$2,960,000	\$740,000	\$0	\$0	
2020	CON		L-STBG		\$5,000,0		\$4,000,000	\$1,000,000	\$0	\$0	
				Total	\$9,500,0	000	\$7,600,000	\$1,900,000	\$0	\$0	
Revisio	n Date	4/28	/2017								
Revisio	n Details								G from FY2019 t termini have not		
Previou	s TIP No.	2011	-029, 2014-059								



TIP No.	17-2014-069	Revision No. 1	Mobility Plan N	o. 09-653					
TDOT PIN	100241.03		STII	P No. 1747085					
Project Name	Alcoa Hwy. (SR-115	/ US-129)							
Lead Agency	TDOT								
Total Project Cost	\$39,600,000								
Project Description	Widen 4-lane to 6-la	ne including pedestrian	and bicycle facil	ities.					
Termini/Intersection		to Cherokee Trail intercl							
Counties	Knox								
City/Agency	City of Knoxville	ty of Knoxville							
Length	1.6 (miles	5)	Cor	nformity Status	Non-Exempt				
Additional Details									
Programmed Funds									
<u>FY</u> <u>Phase</u>	Funding Typ	<u>rotal Funds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>			
2017 ROW	NHPP	\$14,000,000	\$11,200,000	\$2,800,000	\$0	\$0			
		Total \$14,000,000	\$11,200,000	\$2,800,000	\$0	\$0			
Revision Date	4/4/2017								
Revision Details	Revise project map	to match termini.							
Previous TIP No.	2011-002, 2014-069								
KINGSTON PIKE		ALCOA HWY	NEYLAND DI	158	333	441			

TIP No.	17-2014-074 Rev	vision No. 2	Mobility Plan No. 09	9-423			
TDOT PIN	103899.00		STIP No	1753025			
Project Name	US-321 (SR-73) Widening						
Lead Agency	TDOT						
Total Project Cost	\$14,000,000						
Project Description	Widen from 4-lanes to 6-lar	nes					
Termini/Intersection	From Simpson Rd east to north of SR-2 (US-11) in Lenoir City						
Counties	oudon						
City/Agency	City of Lenoir City						
Length	1.4 (miles) Conformity Status Exempt						
Additional Details							
Programmed Funds							
<u>FY</u> <u>Phase</u>	Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	Local	Other	
2017 PE-D	NHPP	\$500,000	\$400,000	\$100,000	\$0	\$0	
2017 ROW	NHPP	\$2,100,000	\$1,680,000	\$420,000	\$0	\$0	
2018 CON	NHPP	\$9,800,000	\$7,840,000	,960,000	\$0	\$0	
	Total	\$12,400,000	\$9,920,000	2,480,000	\$0	\$0	
Revision Date	6/9/2017						
Revision Details	Add \$2,100,000 of NHPP to	the ROW in FY	2017				
Previous TIP No.	2014-074						



TIP No.	17-2014-084	Revision No. 0	Mobility Plan No. 09	-258		
TDOT PIN	101651.03		STIP No.	1705015		
Project Name	Relocated Alcoa Hw	y. (SR-115 / US-129)				
Lead Agency	TDOT					
Total Project Cost	\$60,000,000					
Project Description	Construct New 4-Lar	ne				
Termini/Intersection	From SR-162 (Pellis	sippi Pkwy) to South S	ingleton Station Rd			
Counties	Blount					
City/Agency	City of Alcoa					
Length	1.3 (miles	s)	Conformi	ty Status	Non-Exempt	
Additional Details						
Programmed Funds						
<u>FY</u> <u>Phase</u>	Funding Typ	<u>oe</u> <u>Total Funds</u>	<u>Federal</u>	State	Local	<u>Other</u>
2017 ROW	NHPP	\$25,000,000	\$20,000,000 \$5	,000,000	\$0	\$0
		Total \$25,000,000	\$20,000,000 \$5	,000,000	\$0	\$0
Revision Date						
Revision Details						
Previous TIP No.	2014-084					
	140	129			33	

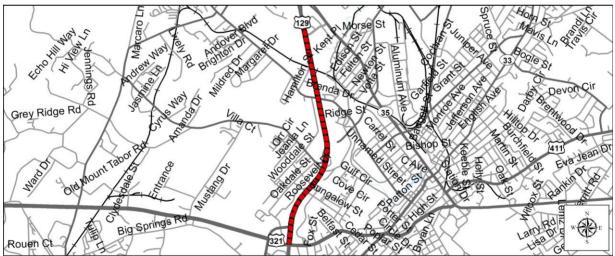
TIP No.	17-2014-300	Davisian No. 2	Mobility Dlan No.	Consistent	ith Mobility Dlan	Cool 1			
	17-2014-300	Revision No. 2	Mobility Plan No.		in wobility Plan	i Goai i			
TDOT PIN			STIP No).					
Project Name	PM 2.5 Diesel Emiss	sions Reduction Strate	gies Grouping						
Lead Agency	TDOT								
Total Project Cost	\$9,862,348								
Project Description	See Appendix E: TI included but not limit	OOT Metropolitan Group ted for eligibility.	oings Definitions for a	more comp	orehensive list o	factivities			
Termini/Intersection									
Counties	Anderson, Blount, K	nderson, Blount, Knox, Loudon, Roane, Sevier							
City/Agency									
Length	(miles)	Conform	nity Status	Exempt				
Additional Details	The Knoxville Area 7 2017.	Fransit \$2,259,906 (fed	eral share) CMAQ fur	nds were flea	xed to FTA on J	anuary 25,			
Programmed Funds									
FY Phase	Funding Typ	<u>e Total Funds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>			
2017 PUR	CMAQ	\$9,862,348	\$7,774,154	\$282,488	\$1,805,706	\$0			
		Total \$9,862,348	\$7,774,154	\$282,488	\$1,805,706	\$0			
Revision Date	4/27/2017								
Revision Details	Adjust project by upo	dating Mobility Plan goa	al number.						
Previous TIP No.	2014-300								

Grantee	Project Description	Federal Funds
Loudon County Hwy Dept	9 Total Diesel Vehicle Replacements	\$940,000
First Utility District of Knox County	3 Total Diesel Vehicle Replacements	\$468,000
Lenoir City Utilities Board	12 Total Diesel Vehicle Replacements	\$698,400
Knoxville Area Transit	5 Total Diesel Vehicle Replacements	\$2,259,906
City of Lenoir City	7 Total Diesel Vehicle Replacements	\$403,200
Anderson County EMS	2 Total Diesel Vehicle Replacements	\$216,000
Anderson County Hwy Dept	9 Total Diesel Vehicle Replacements	\$859,480
City of Loudon	13 Total Diesel Vehicle Replacements	\$1,169,018
Knoxville Utilities Board	3 Total Diesel Vehicle Replacements	\$123,750
City of Knoxville	5 Total Diesel Vehicle Replacements	\$450,000
Powell-Clinch Utility District	2 Total Diesel Vehicle Replacements	\$116,000
West Knox Utility District	1 Total Diesel Vehicle Replacements	\$70,400

TIP No.	17-2014-304	Revision No. 1	Mobility Plan No.	Consistent v	vith Mobility Plar	Goal 4				
TDOT PIN			STIP	No.						
Project Name	HELP Truck Expansi	on Program								
Lead Agency	TDOT	DOT								
Total Project Cost	\$945,720									
Project Description	three operators and I	ng TDOT Freeway Serv by expanding routes to nonattainment and main	provide coverage a							
Termini/Intersection										
Counties	Anderson, Jefferson,	derson, Jefferson, Knox, Loudon, Roane								
City/Agency										
Length	(miles)	Confo	ormity Status	Exempt					
Additional Details										
Programmed Funds										
<u>FY</u> <u>Phase</u>	Funding Typ	e <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>				
2017 OPER	CMAQ	\$231,113	\$184,890	\$46,223	\$0	\$0				
		Total \$231,113	\$184,890	\$46,223	\$0	\$0				
Revision Date	4/27/2017									
Revision Details	Adjust project by upo	dating Mobility Plan goa	al number.							
Previous TIP No.	2014-304									

TIP No.	17-2017-003	Rev	vision No. 0	Mobility Plan No	o. 09-634		
TDOT PIN	119719.00			STIP	No.		
Project Name	Pellissippi Pkwy/	Hardin Val	ley Interchange	-			
Lead Agency	TDOT						
Total Project Cost	\$3,085,888						
Project Description	Modify existing in northeast quadra		to improve capa	acity, safety and o	perations. Add	I new northbound	d on-ramp in
Termini/Intersection	Interchange at H	ardin Valle	y Rd				
Counties	Knox						
City/Agency							
Length	(m	iles)		Con	formity Status	Non-Exempt	
Additional Details							
Programmed Funds							
<u>FY</u> <u>Phase</u>	Funding	Type	Total Funds	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>
2017 PE-N/PE-D/RV	V/CN HSI	Р	\$1,585,888	\$1,427,300	\$158,588	\$0	\$0
2018 CON	L-ST	3G	\$1,500,000	\$1,200,000	\$300,000	\$0	\$0
		Total	\$3,085,888	\$2,627,300	\$458,588	\$0	\$0
Revision Date	4/26/2017						
Revision Details	Added to the FY2		TIP to be consis	stent with Mobility	Plan 2040		
Previous TIP No.							
O CO MAN THAT	SUCCESSMAN	34	ACC.	HAROM VALLES	EYRD YRD		THOMPSON RD
ATH WAY	SUCCE	HAROIN	CASTAICLN	SCHAEFF	\		N

TIP No.	17-20	017-005	Revi	sion No. 0	ı	Mobility Plan	No. 17-2	02		
TDOT PIN						S ⁻	TIP No.			
Project Name	US 1	29 Widening								
Lead Agency	TDO	Т								
Total Project Cost	\$17,4	478,563								
Project Description	Wide	en from 4 to 6 la	nes with	in existing righ	nt-o	f-way.				
Termini/Intersection	Hall	all Rd (SR-35) to US 321								
Counties	Blou	nt								
City/Agency	City	ty of Maryville, City of Alcoa								
Length	2.6 (miles) Conformity Status Non-Exempt									
Additional Details										
Programmed Funds										
<u>FY</u> <u>Phase</u>		Funding Typ	<u>e</u>	Total Funds		<u>Federal</u>	<u>Sta</u>	<u>te</u>	Local	<u>Other</u>
2019 PE-N/PE-D)	L-STBG		\$1,325,660		\$1,060,528		\$0	\$265,132	\$0
			Total	\$1,325,660		\$1,060,528		\$0	\$265,132	\$0
Revision Date	4/26/	2017								
Revision Details	Adde	ed to the FY2017	7-2020 7	TIP to be cons	iste	nt with Mobil	lity Plan 2	040		
Previous TIP No.										
S Jenning		No.	indover of the day	140 T29	10	Morse St	Alluminul	is is is	Spruce of Boyle	\$ Ln & E



TIP No	TIP No. 17-2017-301 Revision No. 2 Mobility Plan No. Consistent with Mobility Plan Goal 1													
TDOT	PIN						IP No. 1799300							
Project	Name	Highway Safety Improvement Program (HSIP) Grouping												
Lead A			TDOT											
	roject Cost	\$13,402,080												
		ψ.σ,	.02,000											
Project	Description	See Appendix E: TDOT Metropolitan Groupings Definitions for a more comprehensive list of activities included but not limited for eligibility.												
Termin	i/Intersection													
Countie	es	TPO	Area											
City/Agency														
Length			(miles) Conformity Status Exempt											
Additio	nal Details													
Progra	mmed Funds													
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>e</u>	Total Funds	<u>Federal</u>	<u>State</u>	Local	Other					
2017	PE-N/PE-D/RW		HSIP		\$3,000,000	\$2,700,000	\$300,000	\$0	\$0					
2018	PE-N/PE-D/RW	//CN	HSIP		\$3,467,360	\$3,120,624	\$346,736	\$0	\$0					
2019 PE-N/PE-D/RV			HSIP		\$3,467,360	\$3,120,624	\$346,736	\$0	\$0					
2020 PE-N/PE-D/RV		//CN	HSIP		\$3,467,360	\$3,120,624	\$346,736	\$0	\$0					
				Total	\$13,402,080	\$12,061,872	\$1,340,208	\$0	\$0					
Revisio	Revision Date 4/27/2017													
Revision Details Adjust project by updating mobility plan number.							<u> </u>							
Previou	Previous TIP No. 2008-068, 2011-307													

TIP No	TIP No. 17-2017-302 Revision No. 2 Mobility Plan No. Consistent with Mobility Plan Goal 1								Goal 1			
TDOT	PIN						STI	P No. 1799001				
Project	Name	Surface Transportation Block Grant Program (STBG) Grouping										
Lead A	gency	TDOT										
Total P	roject Cost	\$17,598,085										
Project	Description	See Appendix E: TDOT Metropolitan Groupings Definitions for a more comprehensive list of activities included but not limited for eligibility.										
Termin	i/Intersection		<u> </u>									
Countie	es	TPO	TPO Area									
City/Ag	gency											
Length		(miles) Conformity Status Exempt										
Additio	nal Details											
Progra	mmed Funds											
<u>FY</u> <u>Phase</u>			Funding Type		Total Fund	<u>ls</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>		
2017	PE-N/PE-D/RW	//CN	S-STBG		\$7,399,5	21	\$5,919,617	\$1,479,904	\$0	\$0		
2018	PE-N/PE-D/RW	//CN	S-STBG		\$3,399,5	21	\$2,719,617	\$679,904	\$0	\$0		
2019 PE-N/PE-D/RV			S-STBG		\$3,399,5	21	\$2,719,617	\$679,904	\$0	\$0		
2020 PE-N/PE-D/RV		//CN	S-STBG	_	\$3,399,5	21	\$2,719,617	\$679,904	\$0	\$0		
Total \$17,598,084 \$14,078,468 \$3,519,616 \$0 \$0							\$0					
Revision Date 5/16/2017												
Revisio	on Details	TDO	Γ is adding \$4,00	0,000 ((\$3,200,00	0 fec	deral/\$80,000 sta	ate) to FY17				
Previous TIP No.												

TIP No).	17-2017-303 Revision No. 2 Mobility Plan No. Consistent with Mobility Plan Goal								n Goal 1		
TDOT	PIN	1447	100				ST	IP No	1799003			
Projec	t Name	National Highway Performance Program (NHPP) Grouping										
Lead A	Agency	TDOT										
Total F	Project Cost	\$53,480,774										
Projec	t Description	See Appendix E: TDOT Metropolitan Groupings Definitions for a more comprehensive list of activities included but not limited for eligibility.										
Termin	ni/Intersection											
Counti	es	TPO	Area									
City/A	gency											
Length	1	(miles) Conformity Status Exempt										
Additio	nal Details											
Progra	mmed Funds											
FY	<u>Phase</u>		Funding Typ	<u>e</u>	Total Funds		<u>Federal</u>		<u>State</u>	Local		Other
2017	PE-N/PE-D/RW	//CN	NHPP		\$28,000,000		\$22,400,000	\$	5,600,000		\$0	\$0
2017	PE-N/PE-D/RW	//CN	RNHPP		\$5,451,043		\$4,360,834	\$	1,090,209		\$0	\$0
2018	PE-N/PE-D/RW	//CN	NHPP		\$6,676,577		\$5,341,262	\$	1,335,315		\$0	\$0
2019	PE-N/PE-D/RW	//CN	NHPP		\$6,676,577		\$5,341,262	\$	1,335,315		\$0	\$0
2020	PE-N/PE-D/RW	//CN	NHPP		\$6,676,577		\$5,341,262	\$	1,335,315		\$0	\$0
				Total	\$53,480,774		\$42,784,620	\$1	0,696,154		\$0	\$0
Revision Date 7/6/2017												
Revision Details Adding \$5,451,043 (\$4,360,834 federal/\$1,090,209 state) of R-NHPP funds to FY 2017 and add \$20,000,000 (\$16,000,000 federal/\$4,000,000 state) of NHPP funding for FY 2017.							add					
Previo	Previous TIP No. 2008-099, 2011-321											

TIP No	١.	17-2017-304 Revision No. 3 Mobility Plan No. Consistent with Mobility Plan Goal 1										
TDOT	PIN	1747	135		ST	IP No. 1747120	l					
Project	: Name	PHSIP Grouping										
Lead A	gency	TDOT										
	-	\$4,056,000										
		 										
Project Description		See Appendix E: TDOT Metropolitan Groupings Definitions for a more comprehensive list of activities included but not limited for eligibility.										
Termin	i/Intersection	- '										
Countie	es											
City/Ag	jency											
Length		(miles) Conformity Status Exempt										
Additio	nal Details											
Progra	mmed Funds											
<u>FY</u>	<u>Phase</u>		Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>				
2017	PE-N/PE-D/RW	/CN	ACPHSIP	\$450,000	\$0	\$450,000	\$0	\$0				
2017	PE-N/PE-D/RW	/CN	PHSIP	\$601,500	\$601,500	\$0	\$0	\$0				
2017	PE-N/PE-D/RW	//CN	RPHSIP	\$1,200,000	\$960,000	\$240,000	\$0	\$0				
2018	PE-N/PE-D/RW	//CN	PHSIP	\$601,500	\$601,500	\$0	\$0	\$0				
2019 PE-N/PE-D/RW/C		/CN	PHSIP	\$601,500	\$601,500	\$0	\$0	\$0				
2020	PE-N/PE-D/RW	/CN	PHSIP	\$601,500	\$601,500	\$0	\$0	\$0				
	Total \$4,056,000 \$3,366,000 \$690,000 \$0 \$0											
Revision Date 4/27/2017												
Revisio	on Details	Adjus	t project by updatin	g Mobility Plan goa	l number.							
Previou	us TIP No.											

TIP No).	17-2	017-200	Rev	rision No.	1	Mobility Plan No	o. 13-860				
TDOT	PIN						STIF	P No.				
Project	Name	Section 5307 Funds										
Lead A	gency	City of Knoxville										
Total P	roject Cost	\$34,	\$34,245,870									
Project	Description	5307 formula transit funding is for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances.										
Termin	i/Intersection	TPO	TPO Planning Area									
Countie	es	TPO	Area									
City/Ag	jency	City	City of Knoxville									
Length		(miles) Conformity Status Exempt										
Additio	nal Details											
Progra	mmed Funds											
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>e</u>	Total Fur	<u>nds</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>	<u>Other</u>		
2017	PUR		SECTION 530	07	\$8,468,	145	\$6,204,025	\$1,132,060	\$1,132,060	\$0		
2018	PUR		SECTION 530	07	\$8,592,	575	\$6,204,025	\$1,194,275	\$1,194,275	\$0		
2019	PUR		SECTION 530	07	\$8,592,	575	\$6,204,025	\$1,194,275	\$1,194,275	\$0		
2020	PUR		SECTION 530	07	\$8,592,	575	\$6,204,025	\$1,194,275	\$1,194,275	\$0		
Total \$34,245,870 \$24,816,100 \$4,714,885 \$4,714,885							\$0					
Revision Date 1/10/2017												
Revision Details Adjust grouping by reducing the state and local matches for FY2017 to \$1,132,060 and \$1,132,060, respectively. Also, adding information in the project notes to show updated allocations to transit operators for FY2017.								, ,				
Previous TIP No.												

Project Sponsor	FY	Project Category	Federal
KAT	17	Capital Projects	\$5,151,348
CAC	1 7	Operating Assistance	\$775,819
ETHRA	17	Operating Assistance	\$175,000
ETHRA	17	Capital Projects	\$101,858

TIP No.		17-20	017-201	Rev	ision No.	2	Mobility Plan No	. 13-8	369			
TDOT P	IN						STIP	No.				
Project I	Name	Secti	ion 5310 Funds	i			-					
Lead Ag	jency	TPO	TPO/MPC									
Total Pro	oject Cost	\$4,54	\$4,543,171									
Project [Description	funds trans may	s for programs to portation service be used for cap	to serve ces and pital proj	the special Americans ects at an	al nee s with 80%	mobility for seniors ds of transit-depe Disabilities Act co federal and 20% I inistration at 1009	ndent omplen ocal m	population nentary natch, fo	ons beyond trad paratransit servi r operating assis	itional public ces. Funding	
Termini/	Intersection	TPO	Planning Area									
Counties	5	TPO	Area									
City/Age	ency											
Length	·		(miles	;)			Con	formity	Status	Exempt		
Addition	al Details		ls listed under 's				unds are estimate DOT.	ed. The	e local a	gency is ultimate	ely	
Program	med Funds											
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>oe</u>	Total Fur	<u>ıds</u>	<u>Federal</u>	Sta	ate	<u>Local</u>	<u>Other</u>	
2017	AD		SECTION 53	310	\$117,	965	\$117,965		\$0	\$0	\$0	
2017	OPER		SECTION 53	310	\$1,145,	700	\$647,850	\$2	23,925	\$273,925	\$0	
2017	PUR		SECTION 53	310	\$863,	339	\$690,671	\$	86,334	\$86,334	\$0	
2018	PUR		SECTION 53	310	\$805,	389	\$541,437	\$1	31,976	\$131,976	\$0	
2019	PUR		SECTION 53	310	\$805,	389	\$541,437	\$1:	31,976	\$131,976	\$0	
2020	PUR		SECTION 53	10	\$805,	389	\$541,437	\$1:	31,976	\$131,976	\$0	
				Total	\$4,543,	171	\$3,080,797	\$7	06,187	\$756,187	\$0	
Revision	n Date	4/25/	2017									
Revision	n Details	(\$44° This 5310 in FY (\$690	7,850 federal/\$2 addition results funds for opera 2017. The prev 0,671 federal/\$8	223,925 in \$1,1 ating cos vious sta 86,334 s	state/\$223 45,700 (\$6 sts in FY2 ate and loc state/\$86,3	3,925 647,85 017. <i>A</i> cal ma 334 loc	10 funds for admir local) in Section 9 50 federal/\$223,92 Add \$57,950 in Settches were incorr cal) available in S ing Section 5310	5310 fu 25 state ection 5 ect. The	unds for e/\$273,9 5310 fun iis additi 5310 fui	operating costs 925 local) availal ds for capital pu on results in \$86	in FY2017. ble in Section rchase funds 53,339	
Previous	us TIP No. 2011-206											

Discretionary 5310			av.
Project Sponsor	FY	Project	Federal Funds
KAT	17	Operating (KAT Rides to Wellness Grant)	\$200,000
TOTAL			\$200,000
Formula 5310	20		
Project Sponsor	FY	Project Category	Federal Funds
Knoxville-Knox Co. CAC VAT	17	Operating	\$325,350
ETHRA	17	Operating	\$122,500
Sertoma	17	Capital (3 vans)	\$96,880
Knoxville Knox County CAC Transit	17	Capital (4 mini-buses)	\$220,000
Emory Valley Center	17	Capital (3 vans)	\$93,216
Wesley House Community Center	17	Capital (1-24 pass. bus)	\$35,808
AGAPE Outreach Homes	17	Capital (2 vans)	\$51,840
ARC Knox County - Sunshine Ind	17	Capital (1 van)	\$27,992
ETHRA	17	Capital (2 mini-buses)	\$74,464
Evergreen Life Services	17	Capital (1 van)	\$30,800
Knoxville Knox County MPC	17	Administration	\$117,965
TOTAL			Č1 106 015

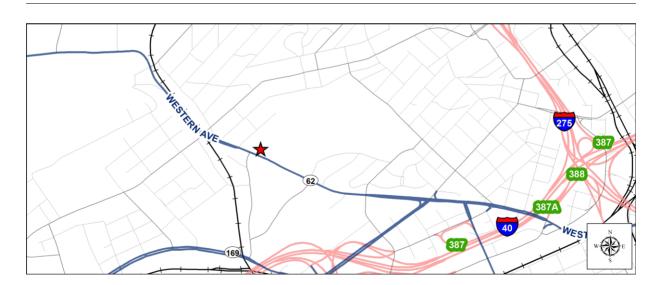
TIP No.		17-2	017-202	Rev	rision No.	1	Mobility Plan No	. 13-871					
TDOT F	PIN						STIP	No.					
Project	Name	Sect	Section 5339 Funds										
Lead A	gency	City	City of Knoxville										
Total Pr	roject Cost	\$3,0	50,464										
Project	Description		formula transit ed equipment ar				apital funding to re ted facilities.	place, reha	bilitate	and purcha	se buses and		
Termini	/Intersection	Knox	ville										
Countie	s	Knox	(
City/Age	ency	City	City of Knoxville										
Length			(miles) Conformity Status Exempt										
Addition	nal Details												
Progran	nmed Funds												
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>e</u>	Total Fur	<u>nds</u>	<u>Federal</u>	<u>State</u>		<u>Local</u>	<u>Other</u>		
2017	PUR		SECTION 53	39	\$762,	616	\$610,092	\$76,262	2	\$76,262	\$0		
2018	PUR		SECTION 53	39	\$762,	616	\$610,092	\$76,262	2	\$76,262	\$0		
2019	PUR		SECTION 53	39	\$762,	616	\$610,092	\$76,262	2	\$76,262	\$0		
2020	PUR		SECTION 53	39	\$762,	616	\$610,092	\$76,262	2	\$76,262	\$0		
				Total	\$3,050,	464	\$2,440,368	\$305,048	3	\$305,048	\$0		
Revision	n Date	1/10	/2017										
Revision	n Details	Adjust grouping by adding information in project notes to show the Section 5339 fund allocation to transit operators for FY2017.											
Previou	s TIP No.												

Project Sponsor	FY	Project Category	Federal
KAT	17	Bus and Bus Facilities Improvements	\$536,972
ETHRA	17	Paratransit Vehicles	\$73,120

TIP No		17-2	017-203	Revis	sion No. 0	Mobility Plan No	o. 17-1002						
TDOT	PIN					STIF	P No.						
Project	Name	ETH	ETHRA Transit Vehicle Replacement Project										
Lead A	gency	ETHRA											
Total P	roject Cost	\$360	0,000										
Project	Description	Purc	hase of demand re	espons	se transit vehic	les for fleet repla	cement						
Termin	i/Intersection	Urba	nized areas of And	dersor	n, Blount, Loud	on, and Sevier Co	ounties.						
Countie	es	Ande	erson, Blount, Loud	don, S	Sevier								
City/Agency													
Length		0	(miles) Conformity Status Exempt										
Additio	nal Details	Thes	se funds will be flex	ced to	FTA								
Progra	mmed Funds												
<u>FY</u>	<u>Phase</u>		Funding Type		Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>				
2017	PUR		L-STBG		\$90,000	\$72,000	\$0	\$18,000	\$0				
2018	PUR		L-STBG		\$90,000	\$72,000	\$0	\$18,000	\$0				
2019	PUR		L-STBG		\$90,000	\$72,000	\$0	\$18,000	\$0				
2020	PUR		L-STBG		\$90,000	\$72,000	\$0	\$18,000	\$0				
Total \$360,000 \$288,000 \$0 \$72,000 \$							\$0						
Revisio	n Date	4/26	/2017										
Revisio	n Details	Adde	ed to the FY2017-2	2020 T	TP to be consis	stent with Mobility	Plan 2040						
Previous TIP No.						·							



TIP No	ı.	17-20	014-204	Rev	rision No.	1	Mobility Plan N	o. 13-861						
TDOT	PIN						STII	P No.						
Project	Name	CAC Transit Vehicle Replacement												
Lead A	gency	CAC												
Total P	roject Cost	\$1,078,125												
Project	Description	rema	CAC will purchase up to six para-transit vehicles in 2017 and up to four para-transit vehicles for each remaining year to continue providing Demand Response transportation to the residents of Knoxville and Knox County.											
Termin	i/Intersection	Knox County and portions of Knoxville												
Countie	es	Knox												
City/Ag	gency	Knox	County											
Length			(miles))			Cor	nformity Status	Exempt					
Additio	nal Details	Thes	e funds will be f	lexed to	o FTA									
Progra	mmed Funds													
<u>FY</u>	<u>Phase</u>		Funding Typ	<u>e</u>	Total Fun	<u>ıds</u>	<u>Federal</u>	<u>State</u>	Local	Other				
2017	PUR		L-STBG		\$431,2	250	\$345,000	\$0	\$86,250	\$0				
2018	PUR		L-STBG		\$215,	625	\$172,500	\$0	\$43,125	\$0				
2019	PUR		L-STBG		\$215,	625	\$172,500	\$0	\$43,125	\$0				
2020	PUR		L-STBG		\$215,0	625	\$172,500	\$0	\$43,125	\$0				
Tota				Total	\$1,078,	125	\$862,500	\$0	\$215,625	\$0				
Revisio	on Date	4/26/2017												
Revisio	on Details	Adding \$215,625 (\$172,500 federal/\$43,125 local) in L-STBG for construction in FY2018, FY2019, and FY2020. This totals an additional \$646,875 (\$517,500 federal/\$129,375 local). Amending project to be consistent with Mobility Plan 2040. Added map to show CAC headquarters.												
Previou	us TIP No.	2011	-207, 2014-204											



TIP No.	17-2014-205	Revision No. 0	Mobility Plan No.	. 13-863							
TDOT PIN			STIP	No.							
Project Name	CAC Volunteer Ass	isted Transit Vehicle Re	eplacement								
Lead Agency	CAC										
Total Project Cost	\$236,930	\$236,930									
Project Description		ssisted Transportation p 17 to continue its servic									
Termini/Intersectio	n										
Counties	Knox										
City/Agency	Knox County										
Length	(miles	s)	Confe	ormity Status	Exempt						
Additional Details	FTA Flex # TN-95-X	(088									
Programmed Fund	s										
<u>FY</u> <u>Phase</u>	<u>Funding Ty</u>	pe <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>					
2017 PUR	L-STBG	\$67,950	\$54,360	\$0	\$13,590	\$0					
		Total \$67,950	\$54,360	\$0	\$13,590	\$0					
Revision Date											
Revision Details											
Previous TIP No.	2014-205		-								

TIP No.	17-20	17-204	Revision	1 No. 0	Mobility Plan	No. 17-1007				
TDOT PIN					ST	TP No.				
Project Name	Purch	ase KAT Vehicl	es - Fixed	Route Bus	es	<u> </u>				
Lead Agency	KAT									
Total Project Cost	\$3,50	1,461								
Project Description	Purch	ase of fixed-rou	te buses fo	or fleet repl	lacement or mind	or expansion.				
Termini/Intersection	Knoxv	rille and Knox C	ounty							
Counties	Knox									
City/Agency	ity/Agency									
ength 0 (miles) Conformity Status Exempt										
Additional Details	These	funds will be fle	exed to FT	A						
Programmed Funds										
FY Phase		Funding Type	<u>To</u>	otal Funds	<u>Federal</u>	State	Local	Other		
2017 PUR		L-STBG		\$522,941	\$418,353	\$0	\$104,588	\$0		
2018 PUR		L-STBG		1,470,875	\$1,176,700	\$0	\$294,175	\$0		
2019 PUR		L-STBG	\$	1,507,645	\$1,206,116	\$0	\$301,529	\$0		
			Total \$	3,501,461	\$2,801,169	\$0	\$700,292	\$0		
Revision Date	4/26/2	2017								
Revision Details	Added	to the FY2017	-2020 TIP	to be cons	istent with Mobili	ty Plan 2040				
Previous TIP No.										
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TIP No.	17-2017-205	Revisio	n No. 0	Mobility Plan N	No. 17-1009		
TDOT PIN				ST	IP No.		
Project Name	KAT Implementation	n of ITS Tec	hnologies				
Lead Agency	KAT						
Total Project Cost	\$1,000,000						
Project Description	Technology upgrade information systems diagnostics, safety	s, onboard V	ViFi, automa	ated passenger o	counters, mobile	fare payment, bu	
Termini/Intersection	Knox County and K	noxville					
Counties	Knox						
City/Agency							
Length	0 (mile:	s)		Со	nformity Status	Exempt	
Additional Details	These funds will be	flexed to FT	Ā.				
Programmed Funds							-
<u>FY</u> <u>Phase</u>	Funding Ty	pe <u>T</u>	otal Funds	<u>Federal</u>	<u>State</u>	<u>Local</u>	Other
2018 PUR	L-STBG		\$1,000,000	\$800,000	\$0	\$200,000	\$0
		Total	\$1,000,000	\$800,000	\$0	\$200,000	\$0
Revision Date	4/26/2017						
Revision Details	Added to the FY201	7-2020 TIP	to be consi	stent with Mobilit	y Plan 2040		-
Previous TIP No.							
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TIP No.	17-2017-206	Revision No. 0	Mobility Plan No. 17-100	18		
TDOT PIN			STIP No.			
Project Name	Purchase KAT Vehic	cles - Fixed Route Tro	lley Buses			
Lead Agency	KAT					
Total Project Cost	\$2,475,000					
Project Description	Purchase of fixed-ro	ute trolley buses for fle	eet replacement or minor ex	pansior	n	
Termini/Intersection	Knox County and Kr	noxville				
Counties	Knox					
City/Agency						
Length	0 (miles	3)	Conformity St	atus	Exempt	
Additional Details	These funds will be	flexed to FTA				
Programmed Funds						
<u>FY</u> <u>Phase</u>	Funding Typ	<u>De</u> <u>Total Funds</u>	<u>Federal</u> <u>State</u>		<u>Local</u>	<u>Other</u>
2020 PUR	L-STBG	\$2,475,000	\$1,980,000	\$0	\$495,000	\$0
		Total \$2,475,000	\$1,980,000	\$0	\$495,000	\$0
Revision Date	4/26/2017					
Revision Details	Added to the FY201	7-2020 TIP to be cons	istent with Mobility Plan 204	0		
Previous TIP No.						
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TIP No.	17-2017-207	Revision No. 0	Mobility Plan N	No. 17-1010		
TDOT PIN			STI	IP No.		
Project Name	Purchase KAT Vehi	cles - Neighborhood S	Service Buses			
Lead Agency	KAT					
Total Project Cost	\$526,201					
Project Description	Purchase of neighb	orhood service buses	for fleet replaceme	ent or minor exp	ansion	
Termini/Intersection	Knox County and K	noxville				
Counties	Knox					
City/Agency	City of Knoxville					
Length	0 (miles	3)	Со	nformity Status	Exempt	
Additional Details These funds will be flexed to FTA						
Programmed Funds						
<u>FY</u> <u>Phase</u>	Funding Ty	pe <u>Total Funds</u>	<u>Federal</u>	<u>State</u>	Local	Other
2017 PUR	L-STBG	\$265,000	\$212,000	\$0	\$53,000	\$0
2018 PUR	L-STBG	\$128,988	\$103,190	\$0	\$25,798	\$0
2019 PUR	L-STBG	\$132,213	\$105,770	\$0	\$26,443	\$0
		Total \$526,201	\$420,960	\$0	\$105,241	\$0
Revision Date	4/26/2017					
Revision Details	Added to the FY201	7-2020 TIP to be cons	sistent with Mobilit	y Plan 2040		
Previous TIP No.						
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TIP No.		17-2017-	208	Revision No. 0	Mobility Plan No									
TDOT PI	N				STIP	No.								
Project N	lame	KAT Purd	KAT Purchase of ADA Paratransit Vans											
Lead Age	ency	KAT	KAT											
Total Pro	ject Cost	\$1,295,7	16											
Project D	Description	Purchase	e of ADA Parat	transit Vans for flee	t replacement or m	inor expansior	1							
Termini/I	ntersection	Knox Cou	unty and Knox	ville										
Counties	;	Knox												
City/Ager	ncy	City of Kr	noxville											
Length		0	Conformity Status Exempt											
Additiona	al Details	These fur	nds will be flex	red to FTA										
Programi	med Funds													
<u>FY</u>	<u>Phase</u>		Funding Type	Total Funds	<u>Federal</u>	<u>State</u>	Local	<u>Other</u>						
2017	PUR		L-STBG	\$900,000	\$720,000	\$0	\$180,000	\$0						
2018	PUR		L-STBG	\$195,413	\$156,330	\$0	\$39,083	\$0						
2019	PUR		L-STBG	\$200,303	\$160,242	\$0	\$40,061	\$0						
			Т	otal \$1,295,716	\$1,036,572	\$0	\$259,144	\$0						
Revision	Date	4/26/2017	7											
Revision	Details	Added to	the FY2017-2	020 TIP to be cons	istent with Mobility	Plan 2040								
Previous	TIP No.													
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8.5 All Project Summary Table

KNOXVILLE REGIONAL TPO FY2017-2020 TIP: PROJECTS WITH * FUNDS

			Lead					PROG	RAMMED FUN	IDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2014-001		Roadway and intersection improvements	City of	2017	CON	HPP	\$3,624,375	\$2,899,500	\$0	\$724,875	\$0
	Business/Industrial Park Access	to enhance access to I-275 Business Park. Blackstock Ave: extend from Fifth	Knoxville			TOTAL	\$3,624,375	\$2,899,500	\$0	\$724,875	\$0
	Improvements	Ave. to Bernard Ave.; Marion St: realign; University Ave: intersections with W Fifth									
		Ave. and Bernard Ave.									
17-2014-002	Lovell Rd. (SR-131)	Widen 2-lane to 4-lane, including	Knox County	2018	PE-D	L-STBG	\$500,000	\$400,000	\$100,000	\$0	\$0
	Widening	pedestrian and bicycle facilities.				TOTAL	\$500,000	\$400,000	\$100,000	\$0	\$0
17-2014-003	Alcoa Hwy. (SR-115 /	Reconstruct from 4 to 6 lanes with 2	TDOT	2017	ROW	NHPP	\$32,200,000	\$25,760,000	\$6,440,000	\$0	\$0
	US-129)	auxiliary lanes between Singleton Station Rd and Topside Rd (SR 333).				TOTAL	\$32,200,000	\$25,760,000	\$6,440,000	\$0	\$0
17-2014-004	Alcoa Hwy. (SR-115 /	Widen from 4 to 6 lanes, including	TDOT	2017	ROW	NHPP	\$4,100,000	\$3,280,000	\$820,000	\$0	\$0
	US-129)	pedestrian and bicycle facilities.		2018	CON	NHPP	\$39,000,000	\$31,200,000	\$7,800,000	\$0	\$0
						TOTAL	\$43,100,000	\$34,480,000	\$8,620,000	\$0	\$0
17-2014-005	Relocated Alcoa Hwy.	Widen SR-115 from a four lane divided	TDOT	2018	CON	NHPP	\$35,000,000	\$28,000,000	\$7,000,000	\$0	\$0
	(SR-115 / US-129)	facility to a six lane divided facility, extend Tyson Blvd under SR-115 and reconstruct				TOTAL	\$35,000,000	\$28,000,000	\$7,000,000	\$0	\$0
		Hunt Rd overpass.									
17-2014-006	Schaad Rd. Widening	Widen 2-lane to 4-lane	Knox County	2017	PE-D	LOCAL	\$500,000	\$0	\$0	\$500,000	\$0
				2018	ROW/CON	LOCAL	\$8,000,000	\$0	\$0	\$8,000,000	\$0
						TOTAL	\$8,500,000	\$0	\$0	\$8,500,000	\$0
17-2014-007	Foothills Mall Dr.	Extend Foothills Mall Dr. from US 129	City of	2017	PE-D	L-STBG	\$256,000	\$204,800	\$0	\$51,200	\$0
	Extension	Bypass to Foch St. with 2 to 3 lanes with curb and gutter which includes	Maryville	2018	ROW	L-STBG	\$1,202,000	\$961,600	\$0	\$240,400	\$0
		improvements at US 129 Bypass, Foch Street, Dunlap Street, and Watkins Road		2019	CON	L-STBG	\$2,488,000	\$1,990,400	\$0	\$497,600	\$0
		intersections				TOTAL	\$3,946,000	\$3,156,800	\$0	\$789,200	\$0
17-2014-009	Queener Rd. Reconstruction	Reconstruct 2-lane roadway - widen from 15.8 feet to 26 feet, reduce curves.	City of Loudon	2017	PE- D/RW/CN	LIC	\$602,500	\$0	\$602,500	\$0	\$0
	Reconstruction	13.0 feet to 20 feet, reduce curves.	Loudon	2017	PE-	L-STBG	\$602.500	\$482,000	\$0	\$120.500	\$0
					D/RW/CN		ψ00 <u>2</u> ,000	ψ10 <u>2</u> ,000	Q 0	ψ120,000	Ų.
						TOTAL	\$1,205,000	\$482,000	\$602,500	\$120,500	\$0
17-2014-010	Kingston Pk. Sidewalk	Construction of 2,050 linear feet of	Town of	2017	CON	L-STBG	\$700,000	\$560,000	\$0	\$140,000	\$0
	in Farragut	sidewalk along south side of Kingston Pike (SR-1) between Old Stage Road and Virtue Road	Farragut			TOTAL	\$700,000	\$560,000	\$0	\$140,000	\$0
17-2014-015	Simpson Rd.	Reconstruct 2-lane roadway from 18 feet	City of	2017	CON	L-STBG	\$724,000	\$579,200	\$0	\$144,800	\$0
	Reconstruction	to 26 feet; constructing left turn lanes at selected locations and include sidewalk on one side.	Lenoir City			TOTAL	\$724,000	\$579,200	\$0	\$1 <i>44</i> ,800	\$0

			Lead					PROG	RAMMED FUN	IDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2014-019	Tellico Pkwy. / Hwy. 72 Intersection Lighting	Construction of 5 to 7 light standards along 1500 feet. Installation of aluminum poles, conduit, wiring, transformer and luminaries.	Loudon County	2017	CON	L-STBG TOTAL	\$73,100 \$73,100	\$73,100 \$73,100	\$0 <i>\$0</i>	\$0 <i>\$0</i>	\$0 <i>\$0</i>
17-2014-024	Old Stage Rd. / Kingston Pk. Greenway Connector	Construction of an 8 foot asphalt greenway from the north side of Kingston Pk. near Everett Rd., under the existing	Town of Farragut	2017 2018	PE-D ROW	L-STBG L-STBG	\$32,000 \$290,000	\$25,600 \$232,000	\$0 \$0	\$6,400 \$58,000	\$0 \$0
	Oreenway Connector	Kingston Pk. bridge over Little Turkey Creek to Way Station Trail , just north of its terminus near Old Stage Rd.		2019	CON	L-STBG TOTAL	\$220,000 \$542,000	\$176,000 \$433,600	\$0 \$ <i>0</i>	\$44,000 \$108,400	\$0 <i>\$0</i>
17-2014-025	Pellissippi Pkwy. (SR- 162) Extension	HPP #TN053 (Section 1602-TEA21). Construct new 4 lane.	TDOT	2019 2020	ROW CON	HPP NHPP TOTAL	\$10,090,162 \$37,300,000 \$47,390,162	\$8,072,130 \$29,840,000 \$37,912,130	\$2,018,032 \$7,460,000 \$9,478,032	\$0 \$0 \$0	\$0 \$0 <i>\$0</i>
17-2014-028	Pistol Creek Greenway - Phase IV	Construction of 10 foot wide greenway trail and amenities consisting of approximately 11,716 linear feet of asphaltic trail and 200 feet of wood boardwalk generally paralleling Pistol Creek.	City of Alcoa	2017	PE- D/RW/CN	L-STBG TOTAL	\$1,356,193 \$1,356,193	\$1,084,954 \$1,084,954	\$0 \$0	\$271,239 \$271,239	\$0 <i>\$0</i>
17-2014-031	N.Central St. Road Diet and Streetscape Project	Road diet and streetscape project, reduce from 4-lanes to 2-lanes with center turn lane. Remainder of public ROW used for bike lanes and street parking.	City of Knoxville	2017	CON	L-STBG TOTAL	\$4,500,000 \$4,500,000	\$3,600,000 \$3,600,000	\$0 <i>\$0</i>	\$900,000 \$900,000	\$0 <i>\$0</i>
17-2014-032	South Knoxville Waterfront Roadway Improvements	The project consists of roadway streetscape improvements and utility relocations along Sevier Ave. and will include a new roundabout constructed at the intersection of Foggy Bottom/Sevier Ave./Island Home Ave. No additional lanes will be constructed.	City of Knoxville	2017	ROW/CON	S-STBG TOTAL	\$7,511,063 \$7,511,063	\$6,008,850 \$6,008,850	\$0 \$0	\$1,502,213 \$1,502,213	\$0 <i>\$0</i>
17-2014-033	Chapman Hwy. (SR-71) Improvements	HPP #1004 (TN123). Widen 4 lane to 5 lane with curb and gutter.	TDOT	2017	CON	NHPP TOTAL	\$9,200,000 \$9,200,000	\$7,360,000 \$7,360,000	\$1,840,000 \$1,840,000	\$0 <i>\$0</i>	\$0 <i>\$0</i>
17-2014-034	SR-73 / US-321 at SR- 2 / US-11	Intersection improvements	TDOT	2017	CON	NHPP TOTAL	\$6,500,000 \$6,500,000	\$5,200,000 \$5,200,000	\$1,300,000 \$1,300,000	\$0 <i>\$0</i>	\$0 <i>\$0</i>
17-2014-035	SR 115 / US 129 (Relocated Alcoa Hwy.)	New alignment, four lane divided facility, construct an interchange at Pellissippi Parkway (SR-162)	TDOT	2017	ROW	NHPP TOTAL	\$24,030,884 \$24,030,884	\$19,224,707 \$19,224,707	\$4,806,177 \$4,806,177	\$0 <i>\$0</i>	\$0 \$0
17-2014-037	Pleasant Ridge Rd.	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	City of Knoxville	2017 2017	CON PE-N/PE-D	L-STBG L-STBG TOTAL	\$4,450,000 \$550,000 \$5,000,000	\$3,560,000 \$440,000 \$4,000,000	\$0 \$0 \$0	\$890,000 \$110,000 \$1,000,000	\$0 \$0 <i>\$0</i>
17-2014-042	Traffic Control Equipment Upgrade - Knoxville	Purchase, installation and integration of signal controllers, signal monitors, closed loop equipment and software. Project also includes development of new signal timing plans for the new equipment and software.	City of Knoxville	2017	PE- D/RW/CN	L-STBG TOTAL	\$6,068,900 \$6,068,900	\$4,855,120 \$4,855,120	\$0 \$0	\$1,213,780 \$1,213,780	\$0 <i>\$0</i>

			Lead					PROG	RAMMED FUN	IDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2014-044		Construction of an off-road trail that will	Knox County	2017	CON	EN	\$1,451,975	\$1,161,580	\$0	\$290,395	\$0
	Greenway - Phase II	connect Phase I of the Knox Blount Greenway to existing pedestrian and bicycle facilities on Alcoa Highway Bridge.				TOTAL	\$1,451,975	\$1,161,580	\$0	\$290,395	\$0
17-2014-047		Complete a sidewalk network between a	City of	2017	ROW/CON	CMAQ	\$630,500	\$504,400	\$0	\$126,100	\$0
	Sidewalk Improvements	high school and nearby neighborhoods along S. Castle St. Approximately 1,400 linear feet of sidewalk.	Knoxville			TOTAL	\$630,500	\$504,400	\$0	\$126,100	\$0
17-2014-058	Concord Rd.	Widen 2-lanes to 4-lanes including	TDOT	2017	CON	L-STBG	\$8,508,140	\$6,806,512	\$1,701,628	\$0	\$0
		pedestrian and bicycle improvements				TOTAL	\$8,508,140	\$6,806,512	\$1,701,628	\$0	\$0
17-2014-059	Sevierville Rd.	Reconstruct Sevierville Rd. (SR-35) from	TDOT	2017	PE-N/PE-D	L-STBG	\$800,000	\$640,000	\$160,000	\$0	\$0
		two lanes to three lanes, curb and gutter, and sidewalks with intersection		2018	ROW	L-STBG	\$3,700,000	\$2,960,000	\$740,000	\$0	\$0
		improvements.		2020	CON	L-STBG	\$5,000,000	\$4,000,000	\$1,000,000	\$0	\$0
						TOTAL	\$9,500,000	\$7,600,000	\$1,900,000	\$0	\$0
17-2014-060	Morganton Rd. Roadway Improvement	Reconstruct two lane section of Morganton Rd. with shoulders, totaling 2.3	Blount County	2017	PE-N/PE- D/RW/CN	HPP	\$750,000	\$750,000	\$0	\$0	\$0
		miles in length. HPP, TN-280.				TOTAL	\$750,000	\$750,000	\$0	\$0	\$0
17-2014-069	Alcoa Hwy. (SR-115 /	Widen 4-lane to 6-lane including	TDOT	2017	ROW	NHPP	\$14,000,000	\$11,200,000	\$2,800,000	\$0	\$0
	US-129)	pedestrian and bicycle facilities.				TOTAL	\$14,000,000	\$11,200,000	\$2,800,000	\$0	\$0
17-2014-070	Lenoir City Downtown	Streetscape improvements along Hwy.	City of	2017	CON	S-STBG-TA	\$512,500	\$410,000	\$97,375	\$5,125	\$0
	Streetscapes - Phase 2	11/S.R. 2 (Broadway) between Grand Street and C Street, and B Street between 1st Avenue and Broadway Street	Lenoir City	2017	PE- D/RW/CN	L-STBG	\$375,000	\$300,000	\$71,250	\$3,750	\$0
				2017	PE- D/RW/CN	STA	\$762,500	\$0	\$724,375	\$38,125	\$0
						TOTAL	\$1,650,000	\$710,000	\$893,000	\$47,000	\$0
17-2014-073	Knoxville South	Connect the south waterfront to University	City of	2017	PE-D	L-STBG	\$500,000	\$400,000	\$0	\$100,000	\$0
	Waterfront Pedestrian/Bicycle Bridge	of Tennessee and the north waterfront trails.	Knoxville			TOTAL	\$500,000	\$400,000	\$0	\$100,000	\$0
17-2014-074	US-321 (SR-73)	Widen from 4-lanes to 6-lanes	TDOT	2018	CON	NHPP	\$9,800,000	\$7,840,000	\$1,960,000	\$0	\$0
	Widening					TOTAL	\$9,800,000	\$7,840,000	\$1,960,000	\$0	\$0
17-2014-076	Buttermilk Road Resurfacing	Resurface existing roadway to eliminate hazardous pavement surface conditions,	Loudon County	2017	PE- D/RW/CN	L-STBG	\$790,000	\$632,000	\$0	\$158,000	\$0
		worn travel lane markings, and reflective pavement markings to improve safety.				TOTAL	\$790,000	\$632,000	\$0	\$158,000	\$0
17-2014-077	Maryville Alcoa Advanced Traffic	Purchase, installation and integration of signal system communications and	City of Maryville	2017	PE-N/PE- D/RW/CN	CMAQ	\$2,520,000	\$2,520,000	\$0	\$0	\$0
	Management System Phase II	equipment along US411 / US321, US129 and SR33. Project also includes development of new signal timing plans for the new equipment and software.				TOTAL	\$2,520,000	\$2,520,000	\$0	\$0	\$0

			Lead					PROG	RAMMED FUN	IDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2014-078	Chapman Highway Advanced Traffic	Expand the City of Knoxville's Advanced Traffic Management System along	City of Knoxville	2017	PE-N/PE- D/RW/CN	CMAQ	\$1,770,000	\$1,770,000	\$0	\$0	\$0
	Management System	Chapman Highway.				TOTAL	\$1,770,000	\$1,770,000	\$0	\$0	\$0
17-2014-079	City of Loudon Traffic Flow Improvement	Replace outdated infrastructure at seven signalized intersections, including	City of Loudon	2017	PE-N/PE- D/RW/CN	CMAQ	\$1,296,400	\$1,296,400	\$0	\$0	\$0
	Project	updating vehicle detection, signal system communication and coordination.				TOTAL	\$1,296,400	\$1,296,400	\$0	\$0	\$0
17-2014-080	Liberty Street	Addition of sidewalks and bicycle facilities	City of	2017	PE-D	L-STBG-TA	\$152,000	\$121,600	\$0	\$30,400	\$0
	Multimodal Project	along Liberty and Division Streets.	Knoxville	2017	PE- D/RW/CN	L-STBG	\$619,065	\$495,252	\$0	\$123,813	\$0
				2017	PE- D/RW/CN	L-STBG-TA	\$1,390,935	\$1,112,748	\$0	\$278,187	\$0
						TOTAL	\$2,162,000	\$1,729,600	\$0	\$432,400	\$0
17-2014-081	Oak Ridge Turnpike Intersection Pedestrian	Pedestrian safety improvements,	City of Oak	2017	CON	L-STBG	\$72,000	\$57,600	\$0	\$14,400	\$0
	Safety Improvements	including marked crosswalks, ramps and pedestrian indications, at two intersections. Includes mast arm	Ridge	2017	PE- D/RW/CN	L-STBG-TA	\$450,000	\$360,000	\$0	\$90,000	\$0
		replacement, to be funded by L-STP funds.				TOTAL	\$522,000	\$417,600	\$0	\$104,400	\$0
17-2014-082	Union Road/N. Hobbs	Reconstruct 2-lane road with addition of	Town of	2017	PE-N/PE-D	L-STBG	\$480,000	\$384,000	\$0	\$96,000	\$0
	Road Improvements	turn lanes and bicycle/pedestrian facilities.	Farragut	2018	ROW	L-STBG	\$500,000	\$400,000	\$0	\$100,000	\$0
				2019	CON	L-STBG	\$3,520,000	\$2,816,000	\$0	\$704,000	\$0
						TOTAL	\$4,500,000	\$3,600,000	\$0	\$900,000	\$0
17-2014-083	Blair Bend Road Resurfacing	Resurface existing roadway to eliminate hazardous pavement surface conditions	City of Loudon	2017	PE-N/PE- D/CN	L-STBG	\$700,000	\$560,000	\$0	\$140,000	\$0
	-	and worn travel lane markings to improve safety.				TOTAL	\$700,000	\$560,000	\$0	\$140,000	\$0
17-2014-084	Relocated Alcoa Hwy.	Construct New 4-Lane	TDOT	2017	ROW	NHPP	\$25,000,000	\$20,000,000	\$5,000,000	\$0	\$0
	(SR-115 / US-129)					TOTAL	\$25,000,000	\$20,000,000	\$5,000,000	\$0	\$0
17-2014-204	CAC Transit Vehicle	CAC will purchase up to six para-transit	CAC	2017	PUR	L-STBG	\$431,250	\$345,000	\$0	\$86,250	\$0
	Replacement	vehicles in 2017 and up to four para- transit vehicles for each remaining year to		2018	PUR	L-STBG	\$215,625	\$172,500	\$0	\$43,125	\$0
		continue providing Demand Response transportation to the residents of Knoxville		2019	PUR	L-STBG	\$215,625	\$172,500	\$0	\$43,125	\$0
		and Knox County.		2020	PUR	L-STBG	\$215,625	\$172,500	\$0	\$43,125	\$0
						TOTAL	\$1,078,125	\$862,500	\$0	\$215,625	\$0
17-2014-205	CAC Volunteer	CAC's Volunteer Assisted Transportation	CAC	2017	PUR	L-STBG	\$67,950	\$54,360	\$0	\$13,590	\$0
	Assisted Transit Vehicle Replacement	program will purchase two hybrid sedans each year for 2014, 2015, 2016, and 2017 to continue its service to Knox County seniors and people with disabilities.				TOTAL	\$67,950	\$54,360	\$0	\$13,590	\$0
17-2014-207	Smart Trips -	Coordinator works with businesses to	TPO/MPC	2017	OPER	CMAQ	\$190,000	\$152,000	\$0	\$38,000	\$0
	Comprehensive Program	assist them in developing or expanding worksite commute options, programs, and other incentives.				TOTAL	\$190,000	\$152,000	\$0	\$38,000	\$0

			Lead					PROG	RAMMED FUN	IDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2014-225	Bike Parking Program	Provide convenient and secure bike	TPO/MPC	2017	PUR	CMAQ	\$10,000	\$8,000	\$0	\$2,000	\$0
		parking destinations by reducing cost for businesses and agencies to provide bike		2018	PUR	CMAQ	\$10,000	\$8,000	\$0	\$2,000	\$0
		parking for employees and customers.				TOTAL	\$20,000	\$16,000	\$0	\$4,000	\$0
17-2014-229	Knox County	The project is to design and implement	Knox County	2017	CON	CMAQ	\$1,205,000	\$1,205,000	\$0	\$0	\$0
	Advanced Traffic Management System - Phase 1	advanced traffic management system on two priority roads - Maynardville Pk and Cedar Bluff Rd.				TOTAL	\$1,205,000	\$1,205,000	\$0	\$0	\$0
17-2014-231	Farragut Traffic Signal	The project will provide signal system	Town of	2017	PE-N/PE-	CMAQ	\$193,000	\$193,000	\$0	\$0	\$0
	Improvement Project	hardware and infrastructure improvements to facilitate signal coordination of all 26 traffic signals in town.	Farragut		D/RW/CN	TOTAL	\$193,000	\$193,000	\$0	\$0	\$0
17-2014-232	Lenoir City ITS: Signal	The project is to design and implement	City of	2017	CON	CMAQ	\$1,165,000	\$1,165,000	\$0	\$0	\$0
	System Design	ITS signal system for 20 coordinated signals along US-321/SR-73 and US-11/SR-2.	Lenoir City			TOTAL	\$1,165,000	\$1,165,000	\$0	\$0	\$0
17-2014-300	PM 2.5 Diesel	See Appendix E: TDOT Metropolitan	TDOT	2017	PUR	CMAQ	\$9,862,348	\$7,774,154	\$282,488	\$1,805,706	\$0
	Emissions Reduction Strategies Grouping	Groupings Definitions for a more comprehensive list of activities included but not limited for eligibility.				TOTAL	\$9,862,348	\$7,774,154	\$282,488	\$1,805,706	\$0
17-2014-304	HELP Truck Expansion	To expand the existing TDOT Freeway	TDOT	2017	OPER	CMAQ	\$231,113	\$184,890	\$46,223	\$0	\$0
	Program	Service Patrol Program by acquiring three new HELP trucks and three operators and by expanding routes to provide coverage and services during peak hours in the Knoxville air quality nonattainment and maintenance area.				TOTAL	\$231,113	\$184,890	\$46,223	\$0	\$0
17-2017-001	Jackson Avenue, Bridges over ramp to	Bridge replacement or possible rehab (no additional lanes) of two ramp structures	City of Knoxville	2017	PE- D/RW/CN	L-STBG	\$4,961,818	\$3,969,454	\$0	\$992,364	\$0
	Gay St.	(one east and one west) leading from Jackson Ave to Gay St. The ramps abut historic structures		2017	PE- D/RW/CN	S-STBG	\$4,785,612	\$3,828,490	\$0	\$957,122	\$0
						TOTAL	\$9,747,430	\$7,797,944	\$0	\$1,949,486	\$0
17-2017-003	Pkwy/Hardin Valley	Modify existing interchange to improve capacity, safety and operations. Add new	TDOT	2017	PE-N/PE- D/RW/CN	HSIP	\$1,585,888	\$1,427,300	\$158,588	\$0	\$0
	Interchange	northbound on-ramp in northeast quadrant.		2018	CON	L-STBG	\$1,500,000	\$1,200,000	\$300,000	\$0	\$0
						TOTAL	\$3,085,888	\$2,627,300	\$458,588	\$0	\$0
17-2017-004	J. Carmichael Greer	Conversion of existing 2-lane vehicle	Loudon	2018	CON	L-STBG	\$2,500,000	\$2,000,000	\$0	\$500,000	\$0
	Pedestrian Bridge	bridge and approaches at Fort Loudoun Dam to a pedestrian and bicycle shared use path	County			TOTAL	\$2,500,000	\$2,000,000	\$0	\$500,000	\$0
17-2017-005	US 129 Widening	Widen from 4 to 6 lanes within existing	TDOT	2019	PE-N/PE-D	L-STBG	\$1,325,660	\$1,060,528	\$0	\$265,132	\$0
		right-of-way.				TOTAL	\$1,325,660	\$1,060,528	\$0	\$265,132	\$0
17-2017-006	Maryville to Townsend	Construction of new trails, extension of	City of	2018	PE-N/PE-D	L-STBG	\$176,356	\$141,085	\$0	\$35,271	\$0
	Greenway - Phase 1 (Brown Creek)	existing trails, and/or improvements to existing trails within the Maryville/Alcoa	Maryville	2019	ROW	L-STBG	\$516,723	\$413,378	\$0	\$103,345	\$0
	,	Greenway Trail System.		2020	CON	L-STBG	\$1,070,481	\$856,385	\$0	\$214,096	\$0
						TOTAL	\$1,763,560	\$1,410,848	\$0	\$352,712	\$0

			Lead					PROG	RAMMED FUN	IDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2017-007	Amerine Rd	Reconstruct 2-lane road with addition of	City of	2017	PE-N/PE-D	L-STBG	\$191,972	\$153,577	\$0	\$38,395	\$0
	Improvements	turn lanes and sidewalk	Maryville	2019	ROW	L-STBG	\$562,475	\$449,980	\$0	\$112,495	\$0
				2020	CON	L-STBG	\$1,165,264	\$932,211	\$0	\$233,053	\$0
						TOTAL	\$1,919,711	\$1,535,768	\$0	\$383,943	\$0
17-2017-009	First Creek Greenway - Broadway Streetscape	Construct a new shared use path extending First Creek Greenway from	City of Knoxville	2018	PE-N/PE- D/RW/CN	L-STBG	\$2,000,000	\$1,600,000	\$0	\$400,000	\$0
		near Cecil Ave to near Woodland Ave		2018	PE-N/PE- D/RW/CN	L-STBG-TA	\$604,148	\$483,318	\$0	\$120,830	\$0
						TOTAL	\$2,604,148	\$2,083,318	\$0	\$520,830	\$0
17-2017-011	East Knox Greenway -	Construct a new shared use path	City of	2019	PE-N/PE-D	L-STBG	\$170,000	\$136,000	\$0	\$34,000	\$0
	Phase 1	connecting First Creek Greenway to Knoxville Botanical Gardens and	Knoxville	2020	CON	L-STBG	\$1,530,000	\$1,224,000	\$0	\$306,000	\$0
		Arboretum				TOTAL	\$1,700,000	\$1,360,000	\$0	\$340,000	\$0
17-2017-015	Papermill Drive	Reconstruct 2-lane road with addition of	City of	2020	PE-N/PE-D	L-STBG	\$1,250,000	\$1,000,000	\$0	\$250,000	\$0
	Complete Street	turn lanes and bicycle/pedestrian facilities	Knoxville			TOTAL	\$1,250,000	\$1,000,000	\$0	\$250,000	\$0
17-2017-017		Construct streetscape improvements in	City of	2019	PE-N/PE-D	L-STBG	\$1,000,000	\$800,000	\$0	\$200,000	\$0
	Streetscape - Phase 3 and 4	the existing right of way that include raised medians replacing center left-turn lane, signal improvements, bike lanes, improved sidewalks, bus pull-offs, and amenities.	Knoxville			TOTAL	\$1,000,000	\$800,000	\$0	\$200,000	\$0
17-2017-023	Tesla Blvd	Construct new 2 lane boulevard extension	City of Alcoa	2017	CON	L-STBG	\$9,780,000	\$7,824,000	\$0	\$1,956,000	\$0
		from the local interstate connector project to Springbrook Road. The connection will include a multi-use path, sidewalks, and stormwater quality intrinsic with the drainage system.				TOTAL	\$9,780,000	\$7,824,000	\$0	\$1,956,000	\$0
17-2017-024	Town of Farragut	Upgrade Farragut's closed loop signal		2017	PE-N/PE-D	CMAQ	\$165,000	\$165,000	\$0	\$0	\$0
	Advanced Traffic Management System	system to a centrally controlled signal system. The limits of the project includes		2018	PE-N/PE-D	CMAQ	\$75,000	\$75,000	\$0	\$0	\$0
	Phase 1	all 26 signals in Farragut's signal system on Kingston Pike, Campbell Station Road,		2019	CON	CMAQ	\$2,685,000	\$2,685,000	\$0	\$0	\$0
		Concord Road, and Parkside Drive. The upgrades include new central traffic signal control software, new signal series controllers, ethernet communication upgrades, bringing pedestrian infrastructure up to current PROWAG standards, cabinet upgrades, detection upgrades, and replacing span wire signals at five intersections with mast arms.				TOTAL	\$2,925,000	\$2,925,000	\$0	\$0	\$0
17-2017-025	Cleaner Operations Vehicles with Propane	Replace two gasoline-powered transportation trucks with Chevrolet trucks converted to propane autogas.	Anderson County	2018	PUR	CMAQ TOTAL	\$80,204 \$80,204	\$60,153 \$60,153	\$0 <i>\$0</i>	\$20,051 \$20,051	\$0 \$ <i>0</i>
17-2017-026	Cleaner EMS Vehicles with Propane	Replace four gasoline-powered EMS trucks with Chevrolet trucks converted to propane autogas.	Anderson County	2018	PUR	CMAQ TOTAL	\$165,674 <i>\$165,674</i>	\$124,587 \$124,587	\$0 <i>\$0</i>	\$41,087 \$41,087	\$0 \$0

			Lead					PROG	RAMMED FUI	NDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2017-027	Advancing Highway	Replace 13 gasoline-powered	Anderson	2018	PUR	CMAQ	\$787,105	\$590,329	\$0	\$196,776	\$0
	Maintenance Vehicles with Propane	maintenance trucks with Ford vehicles converted to propane autogas.	County			TOTAL	\$787,105	\$590,329	\$0	\$196,776	\$0
17-2017-028	Bus Rapid Transit Bus	The project will consist of six BRT bus	City of	2017	PE-N	CMAQ	\$465,000	\$465,000	\$0	\$0	\$0
	Stops/Passenger Information Systems	stops (one for each direction totaling 12 stations), Passenger Information Systems	Knoxville	2018	PE-D	CMAQ	\$325,000	\$325,000	\$0	\$0	\$0
	Install	(PIS) at each station, TSP software integrated into the City's ATMS central		2018	ROW	CMAQ	\$200,000	\$200,000	\$0	\$0	\$0
		software, and a number of queue jump locations, which will be determined during		2019	CON	CMAQ	\$5,405,000	\$5,405,000	\$0	\$0	\$0
		preliminary design efforts.				TOTAL	\$6,395,000	\$6,395,000	\$0	\$0	\$0
17-2017-030	Schaad Rd Extension	Construct new 4-lane roadway with	Knox County	2017	CON	LOCAL	\$26,000,000	\$0	\$0	\$26,000,000	\$0
		sidewalks				TOTAL	\$26,000,000	\$0	\$0	\$26,000,000	\$0
17-2017-031	Robert C. Jackson Drive Extension	Construct new 2-lane roadway with sidewalks.	City of Maryville	2017	PE-N/PE- D/RW/CN	LOCAL	\$10,000,000	\$0	\$0	\$10,000,000	\$0
						TOTAL	\$10,000,000	\$0	\$0	\$10,000,000	\$0
17-2017-200	Section 5307 Funds	5307 formula transit funding is for public	City of	2017	PUR	SECTION 5307	\$8,468,145	\$6,204,025	\$1,132,060	\$1,132,060	\$0
		transportation capital, planning, job access and reverse commute projects, as	Knoxville	2018	PUR	SECTION 5307	\$8,592,575	\$6,204,025	\$1,194,275	\$1,194,275	\$0
		well as operating expenses in certain circumstances.		2019	PUR	SECTION 5307	\$8,592,575	\$6,204,025	\$1,194,275	\$1,194,275	\$0
				2020	PUR	SECTION 5307	\$8,592,575	\$6,204,025	\$1,194,275	\$1,194,275	\$0
						TOTAL	\$34,245,870	\$24,816,100	\$4,714,885	\$4,714,885	\$0
17-2017-201	Section 5310 Funds	5310 formula transit funding is to enhance	TPO/MPC	2017	OPER	SECTION 5310	\$250,000	\$200,000	\$0	\$50,000	\$0
		mobility for seniors and persons with disabilities by providing funds for		2017	PUR	SECTION 5310	\$805,389	\$541,437	\$131,976	\$131,976	\$0
		programs to serve the special needs of transit-dependent populations beyond		2018	PUR	SECTION 5310	\$805,389	\$541,437	\$131,976	\$131,976	\$0
		traditional public transportation services and Americans with Disabilities Act		2019	PUR	SECTION 5310	\$805,389	\$541,437	\$131,976	\$131,976	\$0
		complementary paratransit services.		2020	PUR	SECTION 5310	\$805,389	\$541,437	\$131,976	\$131,976	\$0
		Funding may be used for capital projects at an 80% federal and 20% local match, for operating assistance at a 50% federal and 50% local match, and administration at 100% federal funding.				TOTAL	\$3,471,556	\$2,365,748	\$527,904	\$577,904	\$0
17-2017-202	Section 5339 Funds	5339 formula transit funding is to provide	City of	2017	PUR	SECTION 5339	\$762,616	\$610,092	\$76,262	\$76,262	\$0
		capital funding to replace, rehabilitate and purchase buses and related equipment	Knoxville	2018	PUR	SECTION 5339	\$762,616	\$610,092	\$76,262	\$76,262	\$0
		and to construct bus-related facilities.		2019	PUR	SECTION 5339	\$762,616	\$610,092	\$76,262	\$76,262	\$0
				2020	PUR	SECTION 5339	\$762,616	\$610,092	\$76,262	\$76,262	\$0
						TOTAL	\$3,050,464	\$2,440,368	\$305,048	\$305,048	\$0
17-2017-203	ETHRA Transit Vehicle Replacement Project	Purchase of demand response transit vehicles for fleet replacement	ETHRA	2017	PUR	L-STBG	\$90,000	\$72,000	\$0	\$18,000	\$0
	Nepiacement Floject	vernoes for neer replacement		2018	PUR	L-STBG	\$90,000	\$72,000	\$0	\$18,000	\$0
				2019	PUR	L-STBG	\$90,000	\$72,000	\$0	\$18,000	\$0
				2020	PUR	L-STBG	\$90,000	\$72,000	\$0	\$18,000	\$0
						TOTAL	\$360,000	\$288,000	\$0	\$72,000	\$0

			Lead					PROG	RAMMED FUN	NDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2017-204	Purchase KAT	Purchase of fixed-route buses for fleet	KAT	2017	PUR	L-STBG	\$522,941	\$418,353	\$0	\$104,588	\$0
	Vehicles - Fixed Route Buses	replacement or minor expansion.		2018	PUR	L-STBG	\$1,470,875	\$1,176,700	\$0	\$294,175	\$0
				2019	PUR	L-STBG	\$1,507,645	\$1,206,116	\$0	\$301,529	\$0
						TOTAL	\$3,501,461	\$2,801,169	\$0	\$700,292	\$0
17-2017-205	KAT Implementation of	Technology upgrades including improved	KAT	2018	PUR	L-STBG	\$1,000,000	\$800,000	\$0	\$200,000	\$0
	ITS Technologies	automated vehicle location (AVL), electronic passenger information systems, onboard WiFi, automated passenger counters, mobile fare payment, bus diagnostics, safety systems, traffic management and communication systems				TOTAL	\$1,000,000	\$800,000	\$0	\$200,000	\$0
17-2017-206	Purchase KAT	Purchase of fixed-route trolley buses for	KAT	2020	PUR	L-STBG	\$2,475,000	\$1,980,000	\$0	\$495,000	\$0
	Vehicles - Fixed Route Trolley Buses	fleet replacement or minor expansion				TOTAL	\$2,475,000	\$1,980,000	\$0	\$495,000	\$0
17-2017-207	Purchase KAT Vehicles -	Purchase of neighborhood service buses for fleet replacement or minor expansion	KAT	2017	PUR	L-STBG	\$265,000	\$212,000	\$0	\$53,000	\$0
	Neighborhood Service	Tor neer repracement or million expansion		2018	PUR	L-STBG	\$128,988	\$103,190	\$0	\$25,798	\$0
	Buses			2019	PUR	L-STBG	\$132,213	\$105,770	\$0	\$26,443	\$0
						TOTAL	\$526,201	\$420,960	\$0	\$105,241	\$0
17-2017-208	KAT Purchase of ADA	Purchase of ADA Paratransit Vans for	KAT	2017	PUR	L-STBG	\$900,000	\$720,000	\$0	\$180,000	\$0
	Paratransit Vans	fleet replacement or minor expansion		2018	PUR	L-STBG	\$195,413	\$156,330	\$0	\$39,083	\$0
				2019	PUR	L-STBG	\$200,303	\$160,242	\$0	\$40,061	\$0
						TOTAL	\$1,295,716	\$1,036,572	\$0	\$259,144	\$0
17-2017-209		Continuation of Smart Trips program that	TPO/MPC	2018	OPER	CMAQ	\$160,000	\$160,000	\$0	\$0	\$0
	Ridesharing Program	encourages alternatives to driving alone through an online ridematching and		2019	OPER	CMAQ	\$165,000	\$165,000	\$0	\$0	\$0
		logging database, incentives, marketing and outreach. Operations funds are used		2020	OPER	CMAQ	\$169,000	\$169,000	\$0	\$0	\$0
		for rideshare operations.				TOTAL	\$494,000	\$494,000	\$0	\$0	\$0
17-2017-301	Improvement Program	See Appendix E: TDOT Metropolitan Groupings Definitions for a more	TDOT	2017	PE-N/PE- D/RW/CN	ACPHSIP	\$450,000	\$0	\$450,000	\$0	\$0
	(HSIP) Grouping	comprehensive list of activities included but not limited for eligibility.		2017	PE-N/PE- D/RW/CN	HSIP	\$3,000,000	\$2,700,000	\$300,000	\$0	\$0
				2017	PE-N/PE- D/RW/CN	PHSIP	\$500,000	\$500,000	\$0	\$0	\$0
				2017	PE-N/PE- D/RW/CN	RPHSIP	\$720,000	\$576,000	\$144,000	\$0	\$0
				2018	PE-N/PE- D/RW/CN	HSIP	\$3,467,360	\$3,120,624	\$346,736	\$0	\$0
				2019	PE-N/PE- D/RW/CN	HSIP	\$3,467,360	\$3,120,624	\$346,736	\$0	\$0
				2020	PE-N/PE- D/RW/CN	HSIP	\$3,467,360	\$3,120,624	\$346,736	\$0	\$0
						TOTAL	\$15,072,080	\$13,137,872	\$1,934,208	\$0	\$0

			Lead					PROG	RAMMED FUN	NDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2017-302	Surface Transportation Block Grant Program	See Appendix E: TDOT Metropolitan Groupings Definitions for a more	TDOT	2017	PE-N/PE- D/RW/CN	S-STBG	\$3,399,521	\$2,719,617	\$679,904	\$0	\$0
	(STBG) Grouping	comprehensive list of activities included but not limited for eligibility.		2018	PE-N/PE- D/RW/CN	S-STBG	\$3,399,521	\$2,719,617	\$679,904	\$0	\$0
				2019	PE-N/PE- D/RW/CN	S-STBG	\$3,399,521	\$2,719,617	\$679,904	\$0	\$0
				2020	PE-N/PE- D/RW/CN	S-STBG	\$3,399,521	\$2,719,617	\$679,904	\$0	\$0
						TOTAL	\$13,598,084	\$10,878,468	\$2,719,616	\$0	\$0
17-2017-303	National Highway Performance Program	See Appendix E: TDOT Metropolitan Groupings Definitions for a more	TDOT	2017	PE-N/PE- D/RW/CN	NHPP	\$8,000,000	\$6,400,000	\$1,600,000	\$0	\$0
	(NHPP) Grouping	comprehensive list of activities included but not limited for eligibility.		2018	PE-N/PE- D/RW/CN	NHPP	\$6,676,577	\$5,341,262	\$1,335,315	\$0	\$0
				2019	PE-N/PE- D/RW/CN	NHPP	\$6,676,577	\$5,341,262	\$1,335,315	\$0	\$0
				2020	PE-N/PE- D/RW/CN	NHPP	\$6,676,577	\$5,341,262	\$1,335,315	\$0	\$0
						TOTAL	\$28,029,731	\$22,423,786	\$5,605,945	\$0	\$0
17-2017-304	PHSIP Grouping	See Appendix E: TDOT Metropolitan Groupings Definitions for a more	TDOT	2017	PE-N/PE- D/RW/CN	ACPHSIP	\$450,000	\$0	\$450,000	\$0	\$0
		comprehensive list of activities included but not limited for eligibility.		2017	PE-N/PE- D/RW/CN	PHSIP	\$601,500	\$601,500	\$0	\$0	\$0
				2017	PE-N/PE- D/RW/CN	RPHSIP	\$1,200,000	\$960,000	\$240,000	\$0	\$0
				2018	PE-N/PE- D/RW/CN	PHSIP	\$601,500	\$541,350	\$60,150	\$0	\$0
				2019	PE-N/PE- D/RW/CN	PHSIP	\$601,500	\$541,350	\$60,150	\$0	\$0
				2020	PE-N/PE- D/RW/CN	PHSIP	\$601,500	\$541,350	\$60,150	\$0	\$0
						TOTAL	\$4,056,000	\$3,185,550	\$870,450	\$0	\$0
17-2017-305	STBG Transportation Alternatives (STBG-	This grouping will be used to fund the STBG - transportation alternatives	Various	2017	CON	S-STBG-TA	\$2,545,916	\$2,036,733	\$0	\$509,183	\$0
	TA) Grouping	projects, which provides funding for programs and projects defined as		2017	PE-N/PE- D/RW/CN	L-STBG-TA	\$1,878,163	\$1,502,530	\$0	\$375,633	\$0
		transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for		2018	PE-N/PE- D/RW/CN	L-STBG-TA	\$350,000	\$280,000	\$0	\$70,000	\$0
		improving non-driver access to public transportation and enhanced mobility, community improvement activities, and		2019	PE-N/PE- D/RW/CN	L-STBG-TA	\$955,985	\$764,788	\$0	\$191,197	\$0
		environmental mitigation; recreational trail program projects; and projects for the		2020	PE-N/PE- D/RW/CN	L-STBG-TA	\$955,985	\$764,788	\$0	\$191,197	\$0
		planning, design or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways under the FAST Act.				TOTAL	\$6,686,049	\$5,348,839	\$0	\$1,337,210	\$0

			Lead					PROG	RAMMED FUN	IDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
17-2017-306	Planning and Studies	This grouping will be used to fund	Various	2017	PLN	L-STBG	\$450,000	\$360,000	\$0	\$90,000	\$0
	Grouping	planning reports and studies throughout the Knoxville TPO planning area.		2018	PLN	L-STBG	\$400,000	\$320,000	\$0	\$80,000	\$0
				2019	PLN	L-STBG	\$650,000	\$520,000	\$0	\$130,000	\$0
						TOTAL	\$1,500,000	\$1,200,000	\$0	\$300,000	\$0
17-2017-307	Maintenance and Repair Grouping	Funds will be used for operation, maintenance, repair, or resufacing works.	Various	2017	PE-N/PE- D/RW/CN	L-STBG	\$1,228,448	\$974,064	\$0	\$254,384	\$0
				2019	PE-N/PE- D/RW/CN	L-STBG	\$170,000	\$136,000	\$0	\$34,000	\$0
						TOTAL	\$1,398,448	\$1,110,064	\$0	\$288,384	\$0
17-2017-308	Bike and Pedestrian Grouping	This grouping will be used to fund greenways, sidewalks, bicycle facilities	Various	2018	PE-N/PE- D/RW/CN	L-STBG	\$1,100,000	\$880,000	\$0	\$220,000	\$0
		and amenities, streetscaping, etc. throughout the Knoxville TPO area.		2019	PE-N/PE- D/RW/CN	L-STBG	\$625,000	\$500,000	\$0	\$125,000	\$0
				2020	PE-N/PE- D/RW/CN	L-STBG	\$1,457,500	\$1,166,000	\$0	\$291,500	\$0
						TOTAL	\$3,182,500	\$2,546,000	\$0	\$636,500	\$0

			Lead					PROG	RAMMED FU	NDS	
TIP#	Project Name	Description	Agency	Year	Phase	Source	Total	Federal	State	Local	Other
		* FUNDING SUMMARY		2017	TOTAL	ACPHSIP	\$900,000	\$0	\$900,000	\$0	\$0
				2017	TOTAL	CMAQ	\$19,703,361	\$17,402,844	\$328,711	\$1,971,806	\$0
				2018	TOTAL	CMAQ	\$1,802,983	\$1,543,069	\$0	\$259,914	\$0
				2019	TOTAL	CMAQ	\$8,255,000	\$8,255,000	\$0	\$0	\$0
				2020	TOTAL	CMAQ	\$169,000	\$169,000	\$0	\$0	\$0
				2017	TOTAL	EN	\$1,451,975	\$1,161,580	\$0	\$290,395	\$0
				2017	TOTAL	HPP	\$4,374,375	\$3,649,500	\$0	\$724,875	\$0
				2019	TOTAL	HPP	\$10,090,162	\$8,072,130	\$2,018,032	\$0	\$0
				2017	TOTAL	HSIP	\$4,585,888	\$4,127,300	\$458,588	\$0	\$0
				2018	TOTAL	HSIP	\$3,467,360	\$3,120,624	\$346,736	\$0	\$0
				2019	TOTAL	HSIP	\$3,467,360	\$3,120,624	\$346,736	\$0	\$0
				2020	TOTAL	HSIP	\$3,467,360	\$3,120,624	\$346,736	\$0	\$0
				2017	TOTAL	LIC	\$602,500	\$0	\$602,500	\$0	\$0
				2017	TOTAL	LOCAL	\$36,500,000	\$0	\$0	\$36,500,000	\$0
				2018	TOTAL	LOCAL	\$8,000,000	\$0	\$0	\$8,000,000	\$0
				2017	TOTAL	L-STBG	\$51,046,277	\$40,842,946	\$1,932,878	\$8,270,453	\$0 \$0
				2017	TOTAL	L-STBG	\$16,969,257	\$13,575,405	\$1,140,000	\$2,253,852	\$0 \$0
				2019	TOTAL	L-STBG	\$13,393,644	\$10,714,914	\$0	\$2,678,730	\$0
				2020	TOTAL	L-STBG	\$14,253,870	\$11,403,096	\$1,000,000	\$1,850,774	\$0
				2017	TOTAL	L-STBG-TA	\$3,871,098	\$3,096,878	\$0	\$774,220	\$0
				2017	TOTAL	L-STBG-TA	\$954,148	\$763,318	\$0	\$190,830	\$0 \$0
				2019	TOTAL	L-STBG-TA	\$955,985	\$764,788	\$0	\$191,197	\$0
				2020	TOTAL	L-STBG-TA	\$955,985	\$764,788	\$0 \$0	\$191,197	\$0 \$0
				2017	TOTAL	NHPP	\$123,030,884	\$98,424,707	\$24,606,177	\$191,197	\$0 \$0
				2017	TOTAL	NHPP	\$90,476,577	\$72,381,262	\$18,095,315	\$0 \$0	\$0 \$0
				2019	TOTAL	NHPP	\$6,676,577	\$5,341,262	\$1,335,315	\$0 \$0	\$0 \$0
				2020	TOTAL	NHPP	\$43,976,577	\$35,181,262	\$8,795,315	\$0 \$0	\$0 \$0
				2020	TOTAL	PHSIP	\$1,101,500	\$1,101,500	\$0,795,515	\$0 \$0	\$0 \$0
				2017	TOTAL	PHSIP	\$601,500	\$541,350	\$60,150	\$0 \$0	\$0 \$0
				2019	TOTAL	PHSIP	\$601,500	\$541,350 \$541,350	\$60,150	\$0 \$0	\$0 \$0
				2019	TOTAL	PHSIP	\$601,500	\$541,350 \$541,350	\$60,150	\$0 \$0	\$0
				2020	TOTAL	RPHSIP				\$0 \$0	\$0 \$0
				2017	TOTAL	1	\$1,920,000	\$1,536,000	\$384,000		
						SECTION 5307	\$8,468,145	\$6,204,025	\$1,132,060 \$4,404,075	\$1,132,060 \$4,404,075	\$0 \$0
				2018	TOTAL TOTAL	SECTION 5307	\$8,592,575	\$6,204,025	\$1,194,275 \$1,104,275	\$1,194,275 \$1,104,275	\$0 \$0
				2019 2020	TOTAL	SECTION 5307	\$8,592,575	\$6,204,025 \$6,204,025	\$1,194,275 \$1,104,275	\$1,194,275 \$1,104,275	\$0 \$0
				2020	TOTAL	SECTION 5307	\$8,592,575 \$1,055,380	\$6,204,025 \$741,437	\$1,194,275 \$131,076	\$1,194,275 \$1,194,276	\$0 \$0
				2017	TOTAL	SECTION 5310 SECTION 5310	\$1,055,389	\$741,437 \$541,437	\$131,976 \$131,076	\$181,976 \$131,076	\$0 \$0
				2018			\$805,389	\$541,437 \$541,437	\$131,976 \$131,076	\$131,976 \$131,076	
					TOTAL	SECTION 5310	\$805,389	\$541,437 \$541,437	\$131,976 \$131,076	\$131,976 \$131,076	\$0 \$0
				2020	TOTAL	SECTION 5310	\$805,389	\$541,437	\$131,976	\$131,976	\$0 \$0
				2017	TOTAL	SECTION 5339	\$762,616	\$610,092	\$76,262 \$76,262	\$76,262	\$0 \$0
				2018	TOTAL	SECTION 5339	\$762,616	\$610,092	\$76,262	\$76,262	\$0
				2019	TOTAL	SECTION 5339	\$762,616	\$610,092	\$76,262 \$76,262	\$76,262	\$0 \$0
				2020	TOTAL	SECTION 5339	\$762,616	\$610,092	\$76,262	\$76,262	\$0 \$0
				2017	TOTAL	S-STBG	\$15,696,196	\$12,556,957	\$679,904	\$2,459,335	\$0 \$0
				2018	TOTAL	S-STBG	\$3,399,521	\$2,719,617	\$679,904	\$0	\$0
				2019	TOTAL	S-STBG	\$3,399,521	\$2,719,617	\$679,904	\$0	\$0
				2020	TOTAL	S-STBG	\$3,399,521	\$2,719,617	\$679,904	\$0	\$0
				2017	TOTAL	S-STBG-TA	\$3,058,416	\$2,446,733	\$97,375	\$514,308	\$0
				2017	TOTAL	STA	\$762,500	\$0	\$724,375	\$38,125	\$0

Appendix A: Public Comments



Elizabeth Watkins <elizabeth.watkins@knoxmpc.org>

TIP Comments

Elizabeth Watkins <elizabeth.watkins@knoxtrans.org> To: cdgreenwood@cs.com

Wed, Apr 26, 2017 at 3:30 PM

Ms. Greenwood,

Thank you for your thoughtful comments on the TIP amendment.

Both the Schaad Road widening and Schaad Road extension projects will include sidewalks. We will update the project descriptions at the next opportunity.

While there aren't any projects for Oak Ridge Highway in the current FY2017-2020 TIP, TDOT plans to undertake a project on that corridor from Schaad Rd to Byington Beaver Ridge. This project was identified as one of the projects that may be funded by the IMPROVE Act. The IMPROVE Act was recently passed by the TN legislature to increase the gas tax among other changes. Here's the project map: https://www.tdot.tn.gov/projectneeds/spot#/. Since Oak Ridge Highway is a State Route and managed by TDOT, the best contact about these specific projects is Mark Nagi, TDOT Community Relations Officer, (865) 594-0161.

All public comment requirements were satisfied when updating the FY2017-2020 TIP in October 2016 and this TIP amendment but I agree that more can be done to solicit community feedback on the TIP. We will use your suggestions when we update our community involvement plan later this year.

Thank you, again, for taking the time to provide input!

Best,

Elizabeth Watkins

Elizabeth Watkins

Transportation Planner Knoxville-Knox County Metropolitan Planning Commission Knoxville Regional Transportation Planning Organization T: 865-215-3825

E: Elizabeth.Watkins@knoxtrans.org

On Mon, Apr 24, 2017 at 4:32 PM, <cdgreenwood@cs.com> wrote: Ms. Watkins,

Here are my comments on the latest draft of the TIP:

- 1. First, a comment on the process -- I thought the TPO usually schedules at least one evening meeting to educate the public about the process of developing a TIP and to solicit feedback, but maybe I have been out of the loop too long on this since I have been busy with many other community matters. In any case, I hope you will consider doing so in the future. When the only time to comment is at 9 a.m., it is easy to assume that there is not a lot of interest in gathering significant public input, which some people may take as an indication that the document is too technical for the public to be very interested in it.
- 2. I am glad to see Schaad Road widening included in the final draft (TIP # 17-2014-006). I noticed that, unlike many other projects, this one does not include a mention of pedestrian and bicycle facilities being included. Given the recognition of how important these are to so many residents and given the location of Schaad Road in relation to other roads with sidewalks and to businesses, I assume the plan is to include them, but I think the inclusion of pedestrian and bicycle facilities should be explicitly stated in the document (in both locations where the project is listed).
- 3. More needs to be done to solve the significant safety issues on Oak Ridge Highway in Karns that have resulted in multiple fatalities in recent years. At a minimum, the speed limit needs to be reduced since it becomes almost impossible to safely pull out of Wexford Downs subdivision during peak traffic times. I don't know whether a traffic circle is appropriate, but the opinion of Jim Snowden of TDOT that the problem will hopefully be better once a new

KnoxMPC Mail - TIP Comments

traffic signal is added a half mile east, at Karns Valley Road, in conjunction with less traffic coming out on Byington-Solway road to Oak Ridge Highway after completion of the Karns Connector, shows that a closer analysis of the problem needs to be done. I agree that those factors will likely reduce the number of drivers coming out from Byington-Solway onto Oak Ridge Highway, but it does nothing to solve the problem of people trying to turn out of Wexford Downs subdivision into the high-speed eastbound traffic of Oak Ridge Highway. It also does not change the fact that the intersection will still consist of traffic from two side roads trying to merge into high-speed eastbound traffic on Oak Ridge Highway and high-speed westbound traffic from cars that pass through the Karns Valley intersection when the light is green. Hoping that some other changes in the area will solve this problem is like waving your arms and hoping for the best rather than taking a critical look at the real problems and solving them. There should be funding added for a study that also engages the public, since they know full well what the various problems are at that intersection (including the problem of employees trying to safely pull into and out of the M&W Drilling Company immediately adjacent to that intersection) and there should be funding for implementing a real solution.

Thank you for the opportunity to comment. I would have liked to be there in person at the 9 a.m. meeting tomorrow morning, but I am unable to attend.

Carolyn Greenwood 3224 Boomerang Lane Knoxville, TN 37931 865-254-5039

Appendix B: Mobility Plan 2040 Call for Projects Application



2017 Call for Projects & Application Form

Mobility Plan 2040 Goals

The following goals will guide the selection of projects for the 2040 Mobility Plan.

- Maintenance & Efficiency
 - Maintain and enhance our existing infrastructure
- More transportation options
 - Improve access to services and employment with bicycle, pedestrian facilities, and transit projects.
- Congestion reduction
 - Reduce congestion through increased efficiency, increased transportation options, and lastly, increased capacity
- Safety & security
 - Reduce rates of crashes with serious injuries and fatalities; and/or reduce the region's vulnerability to incidents and threats., including extreme weather events
- Health & environment
 - Minimize negative impacts on the environment and people's health, and increase access to active

transportation/physical activity for all ages.

- Economy & freight
 - Improve intermodal connections to help move freight, reduce delay on major freight corridors; and/or support business attraction and retention.
- Equitable access
 - Connect communities to services throughout the region, particularly priority populations.
- Preservation of places
 - Preserve the natural and cultural areas that make our region unique.
- Local Support / Consistency with Plans (5 bonus points if local support/ 5 points subtracted if no local support)
 - Ensure the project is consistent with or included in local, state, or other regional plans. If on a state route, the project is endorsed or supported by TDOT.

Be sure to read through the entire application prior to beginning filling out any fields.

Please submit this application along with any additional supporting materials via <u>email</u> to the Knoxville Regional TPO.

ATTN: Amy Brooks

By e-mail: mobility@knoxtrans.org (include 2017 Project Application in the subject line)
By mail: City/County Building, Suite 403 | 400 Main Street | Knoxville, TN 37902

This form and more information about the Mobility Plan Update can be found online at: www.knoxmobility.org

DEADLINE: TUESDAY, MAY 3, 2016



Received By:	
Date:	

PROJECT APPLICATION FO	ORM	МС	DBILITY PLAN 2040
PROJECT NAME:			
LEAD AGENCY:			
New Project Ex	cisting Project - If Existing, Enter 201	3 RMP ID# Here:	
COUNTIES/MUNICIPALITIES:			
FACILITY NAME:			
TERMINI (If Applicable):	FROM:		LENGTH:
Include a map	TO:		
GENERAL DESCRIPTION:			

PHASES COMPLETED	(SELECT	ALL	THAT	APPLY):

Design	All ROW Acquired
NEPA Documents Approved	Portion of Construction
Partial ROW Acquired	

PURPOSE & NEED

Utilize the box on the following page to address the purpose and need of the proposed project. Additional sheets can be attached, if necessary.

Purpose:

- The Purpose is analogous to the problem. It is the "what" of the proposal.
- The Purpose should be stated as the positive outcome that is expected.
- It should avoid stating a solution as a purpose—as in—the purpose of the project is to build a bypass. Rather, it should indicate what transportation problem(s) are being addressed.
- Where appropriate, it should be stated broadly enough so that more than one mode can be considered and multi-modal solutions are not dismissed prematurely. This should tie back to the "MPO strategy" in terms of modal options.

Need:

- Should establish the evidence that the problem exists, or will exist if projected population and planned land use growth are realized.
- Should be factually and numerically based, i.e. performance measures, latest planning assumptions, crash data, VMT, etc.
- Should support the assertion made in the purpose statement. For example, if the purpose statement is based on safety improvements, the need statement should support the assertion that there is or will be a safety problem to be corrected which would be supported by crash data/analysis.

	Il Support / Consistency with Plans the box below to answer the following questions.
	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservation.
Use	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservatio (economic development, land use, natural features preservation, etc.)? Has the project been endorsed locally through the adoption of official instruments such as, not limited to, a local major thoroughfare plan, transportation element of a comprehensive
Use •	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservation (economic development, land use, natural features preservation, etc.)? Has the project been endorsed locally through the adoption of official instruments such as, not limited to, a local major thoroughfare plan, transportation element of a comprehensive plan?
Use •	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservatio (economic development, land use, natural features preservation, etc.)? Has the project been endorsed locally through the adoption of official instruments such as, not limited to, a local major thoroughfare plan, transportation element of a comprehensive
Use •	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservation (economic development, land use, natural features preservation, etc.)? Has the project been endorsed locally through the adoption of official instruments such as, not limited to, a local major thoroughfare plan, transportation element of a comprehensive plan?
Use •	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservation (economic development, land use, natural features preservation, etc.)? Has the project been endorsed locally through the adoption of official instruments such as, not limited to, a local major thoroughfare plan, transportation element of a comprehensive plan?
Use •	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservation (economic development, land use, natural features preservation, etc.)? Has the project been endorsed locally through the adoption of official instruments such as, not limited to, a local major thoroughfare plan, transportation element of a comprehensive plan?
Use •	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservation (economic development, land use, natural features preservation, etc.)? Has the project been endorsed locally through the adoption of official instruments such as, not limited to, a local major thoroughfare plan, transportation element of a comprehensive plan?
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Use •	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservation (economic development, land use, natural features preservation, etc.)? Has the project been endorsed locally through the adoption of official instruments such as, not limited to, a local major thoroughfare plan, transportation element of a comprehensive plan?
Use •	the box below to answer the following questions. Is the project consistent with local, state, or other regional plans for growth and preservation (economic development, land use, natural features preservation, etc.)? Has the project been endorsed locally through the adoption of official instruments such as, not limited to, a local major thoroughfare plan, transportation element of a comprehensive plan?



PROJECT NA	AME:
Within which category should this project be evaluated	1?
Within community (e.g. intersection improvements; streetscaping projects;	short sections of corridor; sidewalks; short greenways)
Community to region (e.g. major roadway projects; long corridor projects; regi	ional greenways; regional transit)
In addition to the sections below, fill out the information beginning on page 8 for either within community OR co	
Please fill out one of the following Scope of Work section	ons: Roadway, Transit, or Pedestrian and Bicycle.
ROADWAY PROJECT SCOPE OF WORK	
Roadway Widening (Additional Through Lanes) Roadway Widening (No Additional Through Lane	Land Uses Within ¼ Mile of Facility:
ITS Improvements and/or Operational Corridor improvements Intersection Improvements New Roadway / Roadway Extension	Below, check boxes at left to indicate if these land uses are present within ¼ mile of your proposed facility. Check boxes at right to indicate if there will be a direct pedestrian connection between your proposed facility and the land uses. If "Some," please expand on the Notes page.
How are you accommodating bicyclists and pedestrians Bicycle Lane Sidewalk Ped. Refuge Ped. Indication (Signal) Marked Crosswalks Shared Lane (14' wide)	Public park/greenway School Yes No Some Some School Yes No Some Multifamily residential Yes No Some
Greenway Other	How are you accommodating transit users? Mixed-Traffic Transit Route Transit Landings or Bulb-Outs Transit Shelters with bike racks NA – transit service not available
Please utilize the box below to provide additional infor applicable, provide the proposed cross-section, including and proposed medians or center turn lanes proposed In	ng current number of lanes, proposed number of lanes
TRANSIT PROJECT SCOPE OF WORK	
Proposed Improvements: Transit Vehicle Purchase Facility Improvements Passenger Amenities Intelligent Transportation Systems (ITS) Other	Vehicle Use: Replacement Expand Vehicle Fleet Vanpool Express Services ADA Services Other TYPE OF VEHICLE:

CAPACITY OF VEHICLE:_____



Please utilize the box below to provide additional informa	ation about the proposed project's scope of work.
BICYCLE OR PEDESTRIAN PROJECT SCOPE OF WOR	RK
Proposed Improvements:	Land Uses Within ¼ Mile of Facility: Below, check boxes at left to indicate if these land uses are
New FacilityExtension/Connector	present within ¼ mile of your proposed facility.
Amenities/Upgrades	Public Park Yes No Some
Intersection ImprovementsSafe Routes to School program	School Yes No Some Library Yes No Some
Other	☐ Transit Stop ☐ Yes ☐ No ☐ Some
Type:	□ Retail □ Yes □ No □ Some □ Office □ Yes □ No □ Some
Bicycle Lanes Sidewalks	Residential Yes No Some
☐ Shared-Use Trail (Greenway) ☐ Education	Other Yes No Some
Other	Check "Yes, No, or Some" at right to indicate if there will be a direct Bike/Ped connection between your proposed facility and these land uses. If "Some," please expand on the Notes page.
Proposed Features:	
Pedestrian Refuge Marked Crosswalks	Please utilize the box below to provide additional
Pedestrian Indication (Signal)	information about the proposed project's scope of work
Other	Project must serve a transportation purpose.
PROJECT COSTS, FUNDING, & TIMING	
Source of Cost Estimate:	Federal Funding Requested:
Rough Planning Est. Planning Report	100% of Cost 90% of Cost
Preliminary Eng.	80% of Cost
TDOT Estimator Tool	% of Cost
Other	NO (State and Local Only)
Are Matching Funds Available?	By When Should This Project Be Completed?
YES, Funds are locally programmed YES, Funds will be locally programmed	by 2022 by 2034 by 2040 by 2040
NO	by 2030
OTHER	
PROJECT COST ESTIMATE IN 2016 DOLLARS:	



If any phase of the project will occur in first five years, it must also be in the 2017-2020 TIP. Please include the following information.

	egional TPO member a sponsor committed to the project?
Yes	☐ No
Is the project in	the current FY 2014-2017 TIP?
Yes) No

BUDGET WORKSHEET: FISCAL YEAR 2017 - 2020 ESTIMATED COST & SCHEDULE (Use 1.25 percent inflation rate for each year)						
FISCAL YEAR	FUNDING SOURCE	PHASE OF WORK	FEDERAL	STATE	LOCAL	TOTAL
		TOTAL				



PROJECT NAME	

ABOUT YOU		
Name:	E-mail:	
Title:	Phone:	
Department:		
Agency / Organization:		
ATTACHMENTS		
Please include ALL relevant attachme Cost Estimate / Methodology	_	ncluding the following: Other:
Map of Project (If Applicable)		Other:
NEPA Approval Letter (If Applic	cable)	Other:



PROJECT NAME:	
I NOJECI IV NVIE.	

PROJECT EVALUATION

MOBILITY PLAN 2040

WITHIN COMMUNITY PROJECTS

Within Community projects will support local, multimodal connections and access to community resources within a variety of community centers from large urban to rural crossroads. Please provide as much information as you can provide in your project scope on how this project meets the following selection criteria.

	rmation as you can provide in your project scope on how this project meets the following selection eria.
1.	 Maintenance and efficiency – 19 points Does the project increase the useful life of an existing facility? Does the project address a deferred maintenance need? How does the project increase the efficiency of the existing transportation facility and/or network?
2.	 More options – 18 points Does the project support bicycling, walking, and/or transit? Does the project connect major origins and destinations for walking, biking, and transit?
	Does the project address first mile/last mile connectivity for transit and pedestrians?
3.	Safety and security – 16 points
	 Does the project address an identified safety concern?
	 Does the project address security or emergency response (including extreme weather events)?
	 How does the project address safety for all users?



	PROJECT NAME:
E	quitable access – 13 points
•	Does the project improve access and mobility for priority populations, including access to
	employment centers, community facilities, and retail, grocery, and other services? (See mo
	of priority population areas.)
Г	
-	calth and Engineering 12 naints
Н	ealth and Environment – 13 points
•	Does the project improve air quality?
•	Does this project promote increased bicycling and walking as part of daily activity?
•	Does this project improve water quality and include stormwater best management practic
C	ongestion reduction – 8 points
•	Does the project reduce congestion through technology (e.g. traffic signal coordination, re
	time traffic info, and emergency response), adding transportation options or increasing
	capacity?
Г	eapacity.
Pre	eservation of Places – 9 points
•	Does the project have negative impacts on sensitive natural and cultural areas? If so, how
	are those impacts being mitigated?
•	Does this project support the preferred growth concept? (see attached map)
_	
- 1	

FORM 9



8. Economy and freight – 4 points

	PROJECT NAME:
• •	Does the project create a more attractive environment for business recruitment/retention Does the project support travel and tourism? Does the project serve an employment center? Does the project increase the ease and safety of goods delivery and local freight movement, including the first and last mile? Will the project encourage people to spend money locally?



1.

PROJECT EVALUATION

COMMUNITY TO REGION PROJECTS

Community to Region Projects will support strategic, multimodal connections between community centers to regional economic centers in our region and beyond. Please provide as much information in the project scope as you can to describe how this project meets the following selection criteria.

Does the project increase the useful life of an existing regional facility?
Does the project address a deferred maintenance need?
How does the project increase the efficiency of the regional network?
ore options – 17 points
Does the project support bicycling, walking, and/or transit?
Does the project connect major, regional origins and destinations for walking, biking, a transit?
Does the project address first mile/last mile connectivity for transit?
ety and security – 13 points Does the project address an identified, regional safety concern?
Does the project address a regional security or emergency response (including extreme weather events)?
How does the project address safety concerns for all users?
ngestion reduction – 12 points
Does the project reduce congestion through technology (e.g. traffic signal coordination
time traffic info, emergency response), adding transportation options, or increasing cap



PROJECT NAME:
5. Preservation of Places – 11 points
 Does the project minimize negative impacts on sensitive natural and cultural areas of regiona significance? If so, how?
 Does this project support the preferred growth concept? (see attached map)
6. Health and Environment – 10 points
 Does the project improve regional air quality?
 Does this project promote increased bicycling and walking as part of daily activity?
 Does this project improve water quality and include stormwater best management practices?
7. Economy and freight – 9 points
 Does the project create a more attractive environment for business recruitment/retention?
 Does the project support regional travel and tourism?
 Does the project serve a regional employment center?
Does the project support the regional freight network?
 Does the project promote efficient movement of people and goods across the region?
8. Equitable access – 9 points
 Does the project improve access and mobility for priority populations, including access to regional employment centers, community facilities, and retail, grocery, and other services? (See map of priority population areas.)

Appendix C: Previous FY 2014-2017 TIP Project Status

Proj ID	Route	Description	Lead Agency	Year Programmed	WORK	SOURCE	Total Programmed	Federal Amount Programmed	State Amount Programmed	Local Amount Programmed	Total Obligated	ObligStatus as of 4/1/2016	Status Remarks
2014-001	I-275 Business/Industrial Park Access Improvements	Roadway and intersection improvements to enhance access to I-275 Business Park. Blackstock Ave: extend from Fifth Ave. to Bernard	City of Knoxville	2014	PE-D/RW/CN	HPP	\$600,000	\$480,000	\$0	\$120,000	\$0	Not Obligated	
	Access improvements	Ave.; Marion St: realign; University Ave: intersections with W Fifth Ave. and Bernard Ave.	Kiloxville	2015	PE-D/RW/CN	HPP	\$5,024,375	\$4,019,500	\$0	\$1,004,875	\$0	Not Obligated	
2014-002	Lovell Rd. (SR-131) Widening	Widen 2-lane to 4-lane, including pedestrian and	Knox County	2014	PE	L-STP	\$50,000	\$40,000	\$0	\$10,000	\$50,000	Obligated	NEPA Phase Underway
2014-002	Lovell Rd. (SR-131) Widefiling	bicycle facilities.	Knox County	2016	PE-N/PE-D/RW/CN	L-STP	\$48,600	\$38,880	\$0	\$9,720	\$0	Not Obligated	NEPA Pliase Oliderway
2014-003	Alcoa Hwy. (SR-115 / US-129)	Reconstruct from 4 to 6 lanes with 2 auxiliary lanes between Singleton Station Rd and Topside Rd (SR 333).	TDOT	2017	ROW	NHPP	\$36,200,000	\$28,960,000	\$7,240,000	\$0	\$0	Not Obligated	
2014-004	Alcoa Hwy. (SR-115 / US-129)	Widen from 4 to 6 lanes, including pedestrian and bicycle facilities.	TDOT	2017	ROW	NHPP	\$6,100,000	\$4,880,000	\$1,220,000	\$0	\$0	Not Obligated	
2014-005	Relocated Alcoa Hwy. (SR- 115 / US-129)	Widen SR-115 from a four lane divided facility to a six lane divided facility, extend Tyson Blvd under SR-115 and reconstruct Hunt Rd overpass.	TDOT	2016	ROW	NHPP	\$33,130,000	\$26,504,000	\$6,626,000	\$0	\$0	Not Obligated	
2014-006	Schaad Rd. Widening	Widen 2-lane to 4-lane	Knox County	2014	PE-N	L-STP	\$50,000	\$40,000	\$0	\$10,000	\$50,000	Obligated	
				2015	PE-D	L-STP	\$256,000	\$204,800	\$0	\$51,200	\$0	Not Obligated	
2014-007	Foothills Mall Dr. Extension		City of	2015	PE-N	L-STP	\$154,000	\$123,200	\$0	\$30,800	\$154,000	Obligated	NEPA Phase Underway
2014-007	T GOTTING WAIT DT. EXCENSION	Foch St. with 2 to 3 lanes with curb and gutter.	Maryville	2016	ROW	L-STP	\$519,000	\$415,200	\$0	\$103,800	\$0	Not Obligated	NET AT hase officerway
				2017	ROW	L-STP	\$683,000	\$546,400	\$0	\$136,600	\$0	Not Obligated	
				2015	PE-D	HSIP	\$200,000	\$180,000	\$20,000	\$0	\$0	Not Obligated	
2014-008	E. Broadway Ave. / Eagleton Rd. / E. Brown School Rd.	Realign and Install Traffic Signal	TDOT	2016	CON	HSIP	\$800,000	\$720,000	\$80,000	\$0	\$0	Not Obligated	
2014-008	Intersection Improvements	Realign and Install Traffic Signal	IDOI	2016	ROW	HSIP	\$250,000	\$225,000	\$25,000	\$0	\$0	Not Obligated	
				2017	CON	HSIP	\$750,000	\$675,000	\$75,000	\$0	\$0	Not Obligated	
				2016	CON	LIC	\$570,000	\$0	\$570,000	\$0	\$0	Not Obligated	
				2016 2016	CON PE-D	L-STP LIC	\$570,000 \$20,000	\$456,000 \$0	\$0 \$20,000	\$114,000 \$0	\$0 \$0	Not Obligated Not Obligated	
2014-009	Queener Rd. Reconstruction	Reconstruct 2-lane roadway - widen from 15.8	Loudon	2016	PE-D	L-STP	\$20,000	\$16,000	\$0	\$4,000	\$0	Not Obligated	NEPA Phase Underway
2011000	Quodifor Na. Noconomication	feet to 26 feet, reduce curves.	County	2016	PE-N	LIC	\$40,000	\$0	\$40,000	\$0	\$40,000	Obligated	NEI / Triado Gridornay
				2016 2016	PE-N ROW	L-STP LIC	\$40,000 \$12,500	\$32,000 \$0	\$0 \$12,500	\$8,000 \$0	\$40,000 \$0	Obligated Not Obligated	
				2016	ROW	L-STP	\$12,500	\$10,000	\$0	\$2,500	\$0	Not Obligated	
	Kingston Pk. Sidewalk in	Construction of 2,050 linear feet of sidewalk along	Town of	2014	PE	L-STP	\$150,000	\$120,000	\$0	\$30,000	\$90,000	Obligated	
2014-010	Farragut	south side of Kingston Pike (SR-1) between Old Stage Road and Virtue Road	Farragut	2015	CON	L-STP	\$700,000	\$560,000	\$0	\$140,000	\$0	Not Obligated	
		•		2015 2014	ROW PE-N/PE-D/RW/CN	L-STP HPP-TN157	\$312,500 \$617,061	\$250,000 \$493,648	\$0 \$0	\$62,500 \$123,413	\$0 \$0	Not Obligated	
2014-011	Second Creek Greenway in Knoxville	Construction of Second Creek Greenway in Knoxville.	City of Knoxville	2014	CON	TAP	\$316,697	\$493,648 \$253,358	\$0 \$0	\$123,413 \$63,339	\$0 \$0	Obligated Obligated	Fully Obligated
-				2016	PE-D	L-STP	\$100,000	\$253,356	\$20.000	\$63,339	\$100,000	Obligated	
		Dixie Lee Junction (located in both Knox and		2014	PE-N	L-STP	\$25,000	\$20,000	\$5,000	\$0	\$100,000	Obligated	
2014-012	Dixie Lee Junction (US 11 and US 70)	Loudon Counties) intersection improvements such as intersection capacity, operations and	Loudon County	2015	ROW	L-STP	\$5,160,000	\$4,128,000	\$1,032,000	\$0	\$5,160,000	Obligated	Right-of-Way phase
		geometrics, and safety.		2016	CON	L-STP	\$3,185,000	\$2,548,000	\$637,000	\$0	\$0	Not Obligated	
2014-013	Downtown Knoxville Wayfinding Project	Downtown wayfinding signage project to create a consistent signage system to include gateway signs, pedestrian directionals and maps, trailbazers, trolley signs, auto signs, parking garages, etc.	City of Knoxville	2014	CON	L-STP	\$1,820,000	\$1,456,000	\$0	\$364,000	\$1,425,000	Obligated	Complete
2014-014	Ebenezer Rd. / N. Westland Dr. Intersection	Construct a combined left/through westbound turn lane on Westland Dr and a northbound right turn lane on Ebenezer Rd. The existing turn lanes plus the proposed turn lanes will be 200 ft in length.	Knox County	2014	CON	CMAQ	\$601,100	\$480,880	\$0	\$120,220	\$608,000	Obligated	Complete
		Reconstruct 2-lane roadway from 18 feet to 26		2014	PE N	L-STP	\$60,000	\$48,000	\$0	\$12,000	\$60,000	Obligated	
2014-015	Simpson Rd. Reconstruction	feet; constructing left turn lanes at selected	Loudon County	2014 2015	PE-N ROW	L-STP L-STP	\$10,000 \$105,000	\$8,000 \$84,000	\$0 \$0	\$2,000 \$21,000	\$10,000 \$0	Obligated Not Obligated	NEPA Phase Underway
		locations and include sidewalk on one side.		2016	CON	L-STP	\$723,200	\$579,200	\$0	\$144,000	\$0	Not Obligated	

Proj ID	Route	Description	Lead Agency	Year Programmed	WORK	SOURCE	Total Programmed	Federal Amount Programmed	State Amount Programmed	Local Amount Programmed	Total Obligated	ObligStatus as of 4/1/2016	Status Remarks
2014-016	I-40 Auxiliary Ln.	Lovell Rd to I-140 (Pellissippi Pwy), auxiliary lane westbound only.	TDOT	2014	CON	NHPP	\$3,700,000	\$3,330,000	\$370,000	\$0	\$3,164,040	Obligated	Complete
	I-40 Weigh Station Ramp	Extend I-40 weigh station ramps for eastbound		2014	PE-D	NHPP	\$100,000	\$90,000	\$10,000	\$0	\$100,000	Obligated	·
2014-017	Extension	and westbound stations.	TDOT	2014	CON	NHPP	\$2,200,000	\$1,980,000	\$220,000	\$0	\$2,200,000	Obligated	Complete
2014-018	I-640, Broadway Interchange Modifications	Reconstruct and relocate ramps at I-640 and Broadway	TDOT	2014	ROW	NHPP	\$13,100,000	\$11,790,000	\$1,310,000	\$0	\$12,907,111	Obligated	- Under Construction
	Modifications			2016	CON	ACNHPP	\$23,500,000	\$0	\$23,500,000	\$0	\$23,500,000	Obligated	
2014-019	Tellico Pkwy. / Hwy. 72	Construction of 5 to 7 light standards along 1500 feet. Installation of aluminum poles, conduit,	Loudon	2014	PE-N	L-STP	\$2,500	\$2,000	\$0	\$500	\$2,500	Obligated	NEPA Phase Underway
	Intersection Lighting	wiring, transformer and luminaries.	County	2016	PE-D/CN	L-STP	\$72,800	\$72,800	\$0	\$0	\$0	Not Obligated	·
2014-020	Cumberland Ave. (US-70/11	Operational and pedestrian improvements including intersection realignment, turn lanes and	City of	2014	PE-D/RW/CN	L-STP	\$4,200,000	\$3,360,000	\$0	\$840,000	\$4,200,000	Obligated	Complete
2011 020	and SR-1) Phase I	wider sidewalks.	Knoxville	2015	PE-D/RW/CN	L-STP	\$1,183,923	\$947,138	\$0	\$236,785	\$1,183,923	Obligated	Complete
2014-021	Parkside Dr. / Outlet Dr. / Lovell Rd. / Campbell Station Rd. Circulation Study	Traffic circulation study to identify congestion relief and possible new roadway connections in Farragut and West Knox County.	Town of Farragut	2015	TPR	L-STP	\$100,000	\$80,000	\$0	\$20,000	\$100,000	Obligated	Study Underway
2014-023	Everett Rd. / I-40 Greenway	Construction of 8 foot wide greenway from Everett Rd. to the existing terminus of the Grigsby Chapel Greenway at the rear of Berkely Park subdivision.	Town of Farragut	2017	PE-D/RW/CN	LOCAL	\$400,000	\$0	\$0	\$400,000	\$0	Not Obligated	
		Construction of an 8 foot asphalt greenway from		2015	PE	L-STP	\$40,000	\$32,000	\$0	\$8,000	\$8,000	Obligated	
2014-024	Old Stage Rd. / Kingston Pk.	the north side of Kingston Pk. near Everett Rd., under the existing Kingston Pk. bridge over Little	Town of	2016	ROW	L-STP	\$290,000	\$232,000	\$0	\$58,000	\$0	Not Obligated	NEPA Phase Underway
2014-024	Greenway Connector	Turkey Creek to Way Station Trail, just north of	Farragut	2017	CEI	L-STP	\$40,000	\$32,000	\$0	\$8,000	\$0	Not Obligated	NEI AT Hase officially
		its terminus near Old Stage Rd.		2017	CON	L-STP	\$180,000	\$144,000	\$0	\$36,000	\$0	Not Obligated	
	Pellissippi Pkwy. (SR-162)	HPP #TN053 (Section 1602-TEA21). Construct	TDOT	2014	PE-D	HPP	\$2,500,000	\$2,000,000	\$500,000	\$0	\$0	Not Obligated	
2014-025	Extension	new 4 lane.	IDOI	2016 2017	ROW	NHPP	\$10,090,163 \$1,700,000	\$8,072,130 \$1,360,000	\$2,018,033 \$340,000	\$0 \$0	\$0 \$0	Not Obligated Not Obligated	-
2014-026	Advanced Traffic Management System Master Plan and Study	Traffic management master plan and traffic signal optimization program for 24 signalized intersections.	City of Oak Ridge	2014	PLN	L-STP	\$205,000	\$164,000	\$0	\$41,000	\$0	Not Obligated	To be removed, duplicate with 2014- 230
2014-027	Oak Ridge Rails to Trails	Develop a plan for trail along former rail line at the intesection of Elza Gate and the Oak Ridge Tumpike, running parallel to Fairbanks Ave. and ends at the Dept. of Energy Y-12 National Security Complex.	City of Oak Ridge	2014	PLN	L-STP	\$100,000	\$80,000	\$0	\$20,000	\$0	Not Obligated	To be removed
2014-028	Pistol Creek Greenway -	Construction of 10 foot wide greenway trail and amenities consisting of approximately 11,716	City of Alcoa	2014	PE/RW	TAP	\$169,024	\$135,219	\$0	\$33,805	\$35,000	Obligated	NEPA Phase Underway
	Phase IV	linear feet of asphaltic trail and 200 feet of wood boardwalk generally paralleling Pistol Creek.	,	2015	PE-D/RW/CN	L-STP	\$1,340,828	\$1,072,663	\$0	\$268,165	\$0	Not Obligated	,
2014-030	Maryville Downtown Bike / Ped Improvements	Extend the Maryville-Alcoa Greenway Trail by constructing a pedestrian walkway/bicycle connector from Church Ave to Broadway Ave in downtown Maryville.	City of Maryville	2014	PE-D/RW/CN	TAP	\$464,000	\$348,000	\$0	\$116,000	\$0	Not Obligated	To be removed
2014-031	N.Central St. Road Diet and	Road diet and streetscape project, reduce from 4- lanes to 2-lanes with center turn lane. Remainder	City of	2014	PE-N/PE-D/RW/CN	L-STP	\$2,500,000	\$2,000,000	\$0	\$500,000	\$70,000	Obligated	NICDA Diseas Hadanusu
2014-031	Streetscape Project	of public ROW used for bike lanes and street parking.	Knoxville	2016	PE-N/PE-D/RW/CN	L-STP	\$1,200,000	\$960,000	\$0	\$240,000	\$0	Not Obligated	NEPA Phase Underway
2014-032	South Knoxville Waterfront	The project consists of roadway streetscape improvements to Sevier Ave. consisting of new/improved curbs and sidewalks, bike lanes,	City of Knoxville	2014	CON	HPP	\$3,957,707	\$3,166,166	\$0	\$791,541	\$0	Not Obligated	
	Roadway Improvements	planters, pavement marking for on-street parallel parking, utility placement, and handicap access improvements. No addition	NIOXVIIIE	2015	CON	HPP	\$1,500,000	\$1,200,000	\$0	\$300,000	\$0	Not Obligated	
	Chapman Hwy. (SR-71)	HPP #1004 (TN123). Widen 4 lane to 5 lane with		2015	ROW	HPP	\$789,850	\$631,880	\$157,970	\$0	\$789,850	Obligated	
2014-033	Improvements	curb and gutter.	TDOT	2015	ROW	NHPP	\$8,310,150	\$6,648,120	\$1,662,030	\$0	\$7,328,650	Obligated	Right-of-Way phase
				2017	CON	NHPP	\$9,200,000	\$7,360,000	\$1,840,000	\$0	\$0	Not Obligated	
2014-034	SR-73 / US-321 at SR-2 / US-	Intersection improvements	TDOT	2014 2015	PE-D ROW	NHPP	\$300,000 \$10,100,000	\$240,000 \$8,080,000	\$60,000 \$2,020,000	\$0 \$0	\$300,000 \$0	Obligated Not Obligated	Design Phase Underway
	11			2017	CON	NHPP	\$6,500,000	\$5,200,000	\$1,300,000	\$0	\$0	Not Obligated Not Obligated	200igii i ilade Olidelway

Proj ID	Route	Description	Lead Agency	Year Programmed	WORK	SOURCE	Total Programmed	Federal Amount Programmed	State Amount Programmed	Local Amount Programmed	Total Obligated	ObligStatus as of 4/1/2016	Status Remarks
2014-035	SR 115 / US 129 (Relocated Alcoa Hwy.)	New alignment, four lane divided facility, construct an interchange at Pellissippi Parkway (SR-162)	TDOT	2017	ROW	NHPP	\$24,030,884	\$19,224,707	\$4,806,177	\$0	\$0	Not Obligated	
2014-037	Pleasant Ridge Rd.	Add Center Turn Lane	City of	2014	PE	L-STP	\$100,000	\$80,000	\$0	\$20,000	\$100,000	Obligated	Study Underway
	ů.		Knoxville	2015	PE	L-STP	\$500,000	\$400,000	\$0	\$100,000	\$0	Not Obligated	
2014-038	Washington Pk.	Widen from 2-lanes to 4-lanes including	City of Knoxville	2014	PE-N/PE-D/RW/CN	L-STP	\$3,455,600	\$2,764,480	\$0	\$691,120	\$505,600	Obligated	Design Phase Underway
	ů	pedestrian and bicycle facilities.	Knoxville	2016	PE-N/PE-D/RW/CN	L-STP	\$1,690,400	\$1,352,320	\$0	\$338,080	\$0	Not Obligated	,
		Conduct Transportation Planning Report. Initial		2015	TPR	L-STP	\$50,000	\$40,000	\$0	\$10,000	\$0	Not Obligated	
2014-039	Campbell Station Rd.	concept is to widen existing 2 lanes to 3 12-ft lanes with 4-ft bike lanes, curb and gutters,	Town of Farragut	2017	PE-D	L-STP	\$200,000	\$160,000	\$0	\$40,000	\$0	Not Obligated	To be removed
		sidewalk, and walking trail.		2017	PE-N	L-STP	\$200,000	\$160,000	\$0	\$40,000	\$0	Not Obligated	
	Kingston Pk./Campbell Station	Widen to allow an additional left turn lane for		2015	PE	L-STP	\$300,000	\$240,000	\$60,000	\$0	\$0	Not Obligated	
2014-040	Rd. Intersection	eastbound motorists turning onto northbound	Town of Farragut	2016	ROW	L-STP	\$400,000	\$320,000	\$80,000	\$0	\$0	Not Obligated	
	Improvements	Campbell Station Rd.	ranagat	2017	CON	L-STP	\$900,000	\$720,000	\$180,000	\$0	\$0	Not Obligated	
		Realign McCammon Ave at Bessemer St to	City of	2014	CON	L-STP	\$400,000	\$320,000	\$0	\$80,000	\$400,000	Obligated	
2014-041	McCammon Ave. Relocation	create a signalized 4-leg intersection.	Maryville	2014	ROW	L-STP	\$200,000	\$160,000	\$0	\$40,000	\$200,000	Obligated	Under Construction
				2016	CON	L-STP	\$25,000	\$20,000 \$800.000	\$0	\$5,000 \$200.000	\$0	Not Obligated	
				2014	PE-N/PE-D/RW/CN		\$1,000,000	*****	\$0	+,	\$50,000	Obligated	
2014-042	Traffic Control Equipment Upgrade - Knoxville	Purchase of signal controllers, signal monitors, closed loop equipment and software.	City of Knoxville	2015	PE-N/PE-D/RW/CN	L-STP	\$1,000,000	\$800,000	\$0	\$200,000	\$881,100	Obligated	Design Phase Underway
	opgrade - Krioxville	ciosed loop equipment and software.	Kiloxville	2016	PE-N/PE-D/RW/CN	L-STP	\$2,500,000	\$2,000,000	\$0	\$500,000	\$0	Not Obligated	
				2017	PE-N/PE-D/RW/CN	L-STP	\$2,500,000	\$2,000,000	\$0	\$500,000	\$0	Not Obligated	
2014-043	Knox/Blount Greenway - Phase I	Construction of approx. 9,500 linear feet of off- road trail from the south side of Buck Karnes	City of Knoxville	2014	CON	ENHANCE	\$1,530,120	\$1,224,096	\$0	\$306,024	\$78,145	Obligated	Complete
		bridge to CLT #122, Parcel 3 at Alcoa Highway.		2014	CON	TAP	\$500,000	\$400,000	\$0	\$100,000	\$500,000	Obligated	
2014-044	Knox/Blount Greenway - Phase II	Construction of an off-road trail that will connect Phase I of the Knox Blount Greenway to existing pedestrian and bicycle facilities on Alcoa Highway Bridge.	Knox County	2014	CON	ENHANCE	\$1,451,975	\$1,161,580	\$0	\$290,395	\$0	Not Obligated	
2014-047	East Knoxville Sidewalk	Complete a sidewalk network between a high school and nearby neighborhoods along S. Castle	City of	2014	PE-N/PE-D/RW/CN	CMAQ	\$500,000	\$400,000	\$0	\$100,000	\$119,500	Obligated	
2014-047	Improvements	St. Approximately 1,400 linear feet of sidewalk.	Knoxville	2015	PE-N/PE-D/RW/CN	CMAQ	\$250,000	\$200,000	\$0	\$50,000	\$0	Not Obligated	
2014-048	Millertown Pk. and Mill Rd. Intersection improvements	Install a signalized traffic control.	Knox County	2014	CON	CMAQ	\$165,000	\$165,000	\$0	\$0	\$121,470	Obligated	Complete
2014-049	First Creek Greenway - Edgewood Park and Environs	To include 10 foot wide walking and biking trails from the intersection of N Broadway and E Woodland Ave to Edgewood Park.	City of Knoxville	2014	CON	ENHANCE	\$768,000	\$614,400	\$0	\$153,600	\$768,000	Obligated	Fully Obligated
2014-052	Tazewell Pk. (SR-331) and Emory Rd. (SR-131) Intersection Improvements	Intersection improvements	TDOT	2014	CON	STP	\$5,000,000	\$4,000,000	\$1,000,000	\$0	\$4,374,690	Obligated	Under Construction
	Helle Occurred S. C.	Reconfigure intersections and add southbound		2014	ROW	LOCAL	\$600,000	\$0	\$0	\$600,000	\$0	Obligated	
2014-053	Halls Connector Roadway Improvements	thru lane on Norris Fwy from Emory Rd to Maynardville Hwy.	Knox County	2015	CON	NHPP	\$11,500,000	\$9,200,000	\$2,300,000	\$0	\$0	Obligated	Under Construction
2014-054	Knoxville Smartway ITS Expansion	Expand existing system with dynamic message signs, CCTV cameras, and other equipment on interstates 40 and 75.	TDOT	2014	CON	NHPP	\$5,100,000	\$4,590,000	\$510,000	\$0	\$4,054,400	Obligated	
2014-055	City of Knoxville greenway corridor feasibility and assessment	The City of Knoxville will use the funding to do assessment and routing studies of several greenway corridors that are in the Knoxville/Knox County Park, Recreation and Greenway Plan. This will include analysis of existing and needed property or easements	City of Knoxville	2014	PLN	L-STP	\$250,000	\$200,000	\$0	\$50,000	\$250,000	Obligated	Complete
2014-056	Cumberland Ave. (US-70/11 and SR-1) Phase II	Pedestrian improvements and reduce from 4 lanes to 2 lanes with center turn lane.	City of Knoxville	2015	PE-D/RW/CN	L-STP	\$20,448,908	\$16,359,127	\$0	\$4,089,781	\$14,272,423	Obligated	Under Construction
2014-057	Blount County Streetscape Improvements	Improve streetscape and repair pavement. HPP #2005, TN-154	Blount County	2014	PE-N/PE-D/RW/CN	HPP	\$270,000	\$216,000	\$0	\$54,000	\$0	Not Obligated	
0044.050	Od Did	Widen 2-lanes to 4-lanes including pedestrian and	Town of	2015	ROW	L-STP	\$6,200,000	\$4,960,000	\$1,240,000	\$0	\$6,200,000	Obligated	Disha of Woodbare
2014-058	Concord Rd.	bicycle improvements	Farragut	2016	CON	L-STP	\$8,508,140	\$6,806,512	\$1,701,628	\$0	\$0	Not Obligated	Right-of-Way phase

Proj ID	Route	Description	Lead Agency	Year Programmed	WORK	SOURCE	Total Programmed	Federal Amount Programmed	State Amount Programmed	Local Amount Programmed	Total Obligated	ObligStatus as of 4/1/2016	Status Remarks
		Reconstruct Sevierville Rd. (SR-35) from two		2014	PE	L-STP	\$800,000	\$640,000	\$160,000	\$0	\$0	Not Obligated	
2014-059	Sevierville Rd.	lanes to three lanes, curb and gutter, and	City of Maryville	2015	ROW	L-STP	\$3,700,000	\$2,960,000	\$740,000	\$0	\$0	Not Obligated	
		sidewalks with intersection improvements.		2016	CON	L-STP	\$5,000,000	\$4,000,000	\$1,000,000	\$0	\$0	Not Obligated	
2014-060	Morganton Rd. Roadway Improvement	Reconstruct two lane section of Morganton Rd. with shoulders, totaling 2.3 miles in length. HPP, TN-280.	Blount County	2014	PE-D/RW/CN	HPP	\$937,500	\$750,000	\$0	\$187,500	\$0	Not Obligated	
2014-061	Pellissippi Place Greenway - Phase I	The construction of approximately 4,200 linear feet of sidewalk within Pellissippi Place and approximately 650 linear feet of greenway, plus amerilities such as trash receptacle and benches. The greenway trail will connect an existing sidewalk along Clayton	City of Alcoa	2014	PE-N/PE-D/RW/CN	ENHANCE	\$431,550	\$345,240	\$0	\$86,310	\$431,550	Obligated	
2014-062	Halls Greenway - Phase II	Construct 5,410 linear feet of new greenway, mostly ten foot paved path, with some section of wetland boardwalks and a pedestrian crossing over the North Fork of Beaver Creek.	Knox County	2014	PE-N/PE-D/RW/CN	ENHANCE	\$626,602	\$501,282	\$0	\$125,320	\$0	Not Obligated	To be removed
2014-063	Lenoir City Downtown	Improvements to the intersection at "A" St. and Broadway (US-11/SR-2), utility relocations, pedestrian LED lighting and landscaping along	City of Lenoir	2014	CON	ENHANCE	\$100,302	\$80,242	\$0	\$20,060	\$0	Obligated	Previously obligated under 2011 TIP
2011 000	Streetscapes	Broadway between "A" St. and Kingston St. Existing light fixtures will be removed and replaced with new period pedest	City	2014	CON	HPP	\$119,970	\$95,976	\$0	\$23,994	\$0	Obligated	Troncaci, congace and 2011 III
2014-064	Harrison Rd.	Reconstruct two lane road and intersection improvements (add turn lanes and new traffic signal) at Kingston St. Project also includes drainage improvements, sidewalks, and lighting.	City of Lenoir City	2014	CON	L-STP	\$2,200,000	\$1,760,000	\$0	\$440,000	\$0	Not Obligated	Right-of-Way phase
2014-065	Boyd Station Rd., McFee Rd., and Harvey Rd. Underpass	Construct and widen underpass at intersection of Boyd Station, Harvey, and McFee Roads. ID# 2385 TN167.	Town of Farragut	2014	PE	HPP	\$367,487	\$293,990	\$0	\$73,497	\$0	Not Obligated	Re-purposed
2014-066	Railroad Crossing Improvements - Knoxville	Railroad crossing improvements for various railroad crossing to improve circuitry on vehicle protection devices installed. HPP# 1837 TN147.	City of Knoxville	2014	CON	HPP	\$51,294	\$41,035	\$0	\$10,259	\$0	Not Obligated	Re-purposed
2014-067	Railroad Crossing Improvements - Lenoir City	Improve vehicle efficiences by installing signal lights at at-grade highway railroad crossings in Lenoir City. HPP# 1065 TN129.	City of Lenoir City	2014	CON	HPP	\$75,681	\$60,545	\$0	\$15,136	\$0	Not Obligated	Re-purposed
2014-068	Railroad Crossing Improvements - Knoxville	Railroad crossing improvements on vehicle protection devices installed at highway railroad crossings in Knoxville. HPP# 1875 TN149.	City of Knoxville	2014	CON	HPP	\$114,975	\$91,980	\$0	\$22,995	\$0	Not Obligated	Re-purposed
2014-069	Alcoa Hwy. (SR-115 / US-129)	Widen 4-lane to 6-lane including pedestrian and bicycle facilities.	TDOT	2017	ROW	NHPP	\$14,000,000	\$11,200,000	\$2,800,000	\$0	\$0	Not Obligated	
2014-070	Lenoir City CBD Pedestrian	Streetscape improvements along Hwy. 11/S.R. 2	City of Lenoir	2015	PE-D	L-STP	\$200,000	\$160,000	\$0	\$40,000	\$0	Not Obligated	
	Improvements	(Broadway) between Grand Street and C Street.	City	2016	CON	L-STP	\$800,000	\$640,000	\$0	\$160,000	\$0	Not Obligated	
2014-071	Tellico Village Greenway	A study to develop a formal linear park greenway that runs parallel to State Hwy 444 (Tellico Pkwy) from US Hwy 321 south to State Hwy 72.	Loudon County	2015	PLN	L-STP	\$100,000	\$80,000	\$0	\$20,000	\$100,000	Obligated	
2014-072	Alcoa Sidewalk/Greenway Extension	Construction of 1.6 miles of multi-modal asphalt trail for the extension of the existing greenway along N. Wright Rd.	City of Alcoa	2015	CON	ENHANCE	\$849,978	\$679,982	\$0	\$169,996	\$0	Not Obligated	
2014-073	Tennessee River Pedestrian Bridge and Path	Connect the south waterfront to University of Tennessee and the north waterfront trails.	City of Knoxville	2017	PE-D	L-STP	\$1,500,000	\$1,200,000	\$0	\$300,000	\$0	Not Obligated	
2014-074	US-321 (SR-73) Widening	Widen to 6-lanes	TDOT	2017	CON	NHPP	\$9,800,000	\$7,840,000	\$1,960,000	\$0	\$0	Not Obligated	

Proj ID	Route	Description	Lead Agency	Year Programmed	WORK	SOURCE	Total Programmed	Federal Amount Programmed	State Amount Programmed	Local Amount Programmed	Total Obligated	ObligStatus as of 4/1/2016	Status Remarks	
2014-075	Alcoa Hwy (US-129/SR-115) Widening	Widening from 4-lane to 6-lane	TDOT	2016	CON	NHPP	\$78,039,000	\$62,431,200	\$15,607,800	\$0	\$0	Obligated	Under Construction	
2014-076	Buttermilk Road Resurfacing	Resurface existing roadway to eliminate hazardous pavement surface conditions, worn travel lane markings, and reflective pavement markings to improve safety.	Loudon County	2016	PE-N/PE-D/RW/CN	L-STP	\$795,000	\$636,000	\$0	\$159,000	\$5,000	Obligated	NEPA Phase Underway	
2014-077	Maryville Alcoa Advanced Traffic Management System	Upgrade signal system communications and equipment along US411 / US321, US129 and	City of	2016	PE-N/PE-D/RW/CN	CMAQ	\$155,000	\$155,000	\$0	\$0	\$155,000	Obligated	NEPA Phase Underway	
	Phase II	SR33.	Maryville	2017	PE-N/PE-D/RW/CN	CMAQ	\$2,520,000	\$2,520,000	\$0	\$0	\$0	Not Obligated	,	
2014-078	Chapman Highway Advanced	Expand the City of Knoxville's Advanced Traffic	City of	2016	PE-N/PE-D/RW/CN	CMAQ	\$260,000	\$260,000	\$0	\$0	\$0	Not Obligated		
2014-076	Traffic Management System	Management System along Chapman Highway.	Knoxville	2017	PE-N/PE-D/RW/CN	CMAQ	\$1,725,000	\$1,725,000	\$0	\$0	\$0	Not Obligated		
	City of Loudon Traffic Flow	Replace outdated infrastructure at four signalized	a: ()	2016	PE-N/PE-D/RW/CN	CMAQ	\$108,000	\$108,000	\$0	\$0	\$7,000	Obligated		
2014-079	Improvement Project	intersections, including updating vehicle detection, signal system communication and coordination.	City of Loudon	2017	PE-N/PE-D/RW/CN	CMAQ	\$1,235,400	\$1,235,400	\$0	\$0	\$0	Not Obligated		
				2016	PE-N/PE-D/RW/CN	TAP	\$200,000	\$160,000	\$0	\$40,000	\$48,000	Obligated		
2014-080	Liberty Street Multimodal	Addition of sidewalks and bicycle facilities along	City of	2017	CEI	TAP	\$260,000	\$208,000	\$0	\$52,000	\$0	Not Obligated	NEDA Diseas Hadassas	
2014-080	Project	Liberty and Division Streets.	Knoxville	2017	PE-D/RW/CN	L-STP	\$619,065	\$495,252	\$0	\$123,813	\$0	Not Obligated	NEPA Phase Underway	
				2017	PE-D/RW/CN	TAP	\$1,130,935	\$904,748	\$0	\$226,187	\$0	Not Obligated		
	Oak Ridge Tumpike	Pedestrian safety improvements, including			2016	PE-N/PE-D/RW/CN	TAP	\$19,200	\$15,360	\$0	\$3,840	\$16,000	Obligated	
2014-081	Intersection Pedestrian Safety	marked crosswalks, ramps and pedestrian C	arked crosswalks, ramps and pedestrian C dications, at two intersections. Includes mast R	City of Oak Ridge	2017	CON	L-STP	\$72,000	\$57,600	\$0	\$14,400	\$0	Not Obligated	NEPA Phase Underway
	Improvements	arm replacement, to be funded by L-STP funds.		2017	PE-N/PE-D/RW/CN	TAP	\$450,000	\$360,000	\$0	\$90,000	\$0	Not Obligated		
2014-082	Union Road/N. Hobbs Road Improvements	Reconstruct 2-lane roadways including accommodations for pedestrians and bicycles. Proposed cross section is two 12 lanes with turn lanes as needed at major intersections, bicycle lanes, curb & gutter, sidewalk and/or greenway.	Town of Farragut	2017	PE-N/PE-D	L-STP	\$400,000	\$320,000	\$0	\$80,000	\$0	Not Obligated		
2014-083	Blair Bend Road/Williamson Drive Resurfacing	Resurface existing roadway to eliminate hazardous pavement surface conditions and worn travel lane markings to improve safety.	City of Loudon	2016	PE-N/PE-D/CN	L-STP	\$700,000	\$560,000	\$0	\$140,000	\$0	Not Obligated		
2014-084	SR 115 / US 129 (Relocated Alcoa Hwy.)	Construct New 4-Lane	TDOT	2017	ROW	NHPP	\$25,000,000	\$20,000,000	\$5,000,000	\$0	\$0	Not Obligated		
2014-085	Western Avenue (SR-62)	Widen from 2 Lanes to 4 Lanes	TDOT	2017	CON	ACSTP	\$42,800,000	\$0	\$42,800,000	\$0	\$0	Not Obligated		
		5307 formula transit funding is for public		2014	PUR	SECTION 530	\$0	\$0	\$0	\$0	\$0			
2014-200	Section 5307 Funds	transportation capital, planning, job access and	City of	2015	PUR	SECTION 530	\$0	\$0	\$0	\$0	\$0		Transit	
		reverse commute projects, as well as operating expenses in certain circumstances.	Knoxville	2016	PUR	SECTION 530	\$6,550,703	\$5,458,919	\$545,892	\$545,892	\$0			
-				2017	PUR	SECTION 530	\$6,550,703	\$5,458,919	\$545,892	\$545,892	\$0			
		5310 formula transit funding is to enhance mobility for seniors and persons with disabilities		2014	PUR	SECTION 531	\$81,535	\$67,946	\$6,794	\$6,795	\$0			
2014-201	Section 5310 Funds	by providing funds for programs to serve the special needs of transit-dependent populations	TPO/MPC	2015	PUR	SECTION 531	\$64,428	\$53,690	\$5,369	\$5,369	\$0		Transit	
l		beyond traditional public transportation services and Americans with		2016	PUR	SECTION 531	\$533,264	\$444,386	\$44,439	\$44,439	\$0			

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		and Americans with		2017	PUR	SECTION 531	\$533,264	\$444,386	\$44,439	\$44,439	\$0		
		FOOD formula to a life for the picture of the control of		2014	PUR	SECTION 533	\$0	\$0	\$0	\$0	\$0		
2014-202	Section 5339 Funds	5339 formula transit funding is to provide capital funding to replace, rehabilitate and purchase	City of	2015	PUR	SECTION 533	\$0	\$0	\$0	\$0	\$0		Transit
2014-202	Occilor 5555 i unas	buses and related equipment and to construct bus- related facilities.	Knoxville	2016	PUR	SECTION 533	\$731,734	\$585,386	\$73,174	\$73,174	\$0		Hansit
				2017	PUR	SECTION 533	\$731,734	\$585,386	\$73,174	\$73,174	\$0		
2014-203	Purchase KAT Vehicles	Surface transportation funds to purchase fixed route buses for replacement.	KAT	2014	PUR	L-STP	\$1,831,000	\$1,464,800	\$0	\$366,200	\$1,831,000	Obligated	Transit
		CAC will purchase up to four para-transit vehicles		2014	PUR	L-STP	\$635,000	\$508,000	\$0	\$127,000	\$635,000	Obligated	
2014-204	CAC Transit Vehicle	each year to continue providing Demand	CAC	2015	PUR	L-STP	\$356,250	\$285,000	\$0	\$71,250	\$0	Obligated	Transit
	Replacement	Response transportation to the residents of Knoxville and Knox County.		2016	PUR	L-STP	\$391,875	\$313,500	\$0	\$78,375	\$0	Obligated	
				2017	PUR	L-STP	\$431,250	\$345,000	\$0	\$86,250	\$0		
		CAC's Volunteer Assisted Transportation program		2014	PUR	L-STP	\$51,050	\$40,840	\$0	\$10,210	\$0	Obligated	
2014-205	CAC Volunteer Assisted	will purchase two hybrid sedans each year for 2014, 2015, 2016, and 2017 to continue its	CAC	2015	PUR	L-STP	\$56,155	\$44,924	\$0	\$11,231	\$0	Obligated	Transit
	Transit Vehicle Replacement	service to Knox County seniors and people with disabilities.		2016	PUR	L-STP	\$61,775	\$49,420	\$0	\$12,355	\$0	Obligated	
		disabilities.		2017	PUR	L-STP	\$67,950	\$54,360	\$0	\$13,590	\$0		
		Continuation of Smart Trips program that		2014	RIDESH	CMAQ	\$135,000	\$135,000	\$0	\$0	\$135,000	Obligated	
2014-206	Smart Trips - Ridesharing Program	encourages alternatives to driving alone through an online ridematching and logging database,	TPO/MPC	2015	RIDESH	CMAQ	\$155,000	\$155,000	\$0	\$0	\$155,000	Obligated	
	rogram	incentives, marketing and outreach.		2016	RIDESH	CMAQ	\$160,000	\$160,000	\$0	\$0	\$0	Not Obligated	
		Coordinator works with businesses to assist them		2014	RIDESH	CMAQ	\$399,250	\$319,400	\$0	\$79,850	\$399,250	Obligated	
2014-207	Smart Trips - Comprehensive Program	in developing or expanding worksite commute options, programs, and other incentives.	TPO/MPC	2015	RIDESH	CMAQ	\$190,000	\$152,000	\$0	\$38,000	\$0	Not Obligated	
	A i - t - d T t - ti	In the second se		2014	PUR	SECTION 530	\$105,727	\$84,581	\$10,573	\$10,573	\$0		
2014-208	Associated Transportation Improvements	Improvements to super stops, shelters, trolley signs, and enhanced trolley stops.	KAT	2015	PUR	SECTION 530	\$189,861	\$151,889	\$18,986	\$18,986	\$0		Transit
				2014	OPER	SECTION 530	\$105,727	\$84,581	\$10,573	\$10,573	\$0		
2014-209	Security System Costs - E911 Fees	Security system costs and E911 fees.	KAT	2015	OPER	SECTION 530	\$79,481	\$63,585	\$7,948	\$7,948	\$0		Transit
				2014	PUR	SECTION 530	\$1,057,258	\$845,806	\$105,726	\$105,726	\$0		
2014-210	ADA Non-Fixed Route	ADA non-fixed route paratransit service.	KAT	2015	PUR	SECTION 530	\$794,807	\$635,845	\$79,481	\$79,481	\$0		Transit
	Preventive Maintenance /	Transit maintenance, bus parts, tire mileage, and		2014	PUR	SECTION 530	\$7,038,799	\$5,631,039	\$703,880	\$703,880	\$0		
2014-211	Associated Capital Maintenance Items	major component repairs.	KAT	2015	PUR	SECTION 530	\$5,412,922	\$4,330,338	\$541,292	\$541,292	\$0		Transit
		Transit planning activities such as program		2014	OPER	SECTION 530	\$487,500	\$390,000	\$48,750	\$48,750	\$0		
2014-212	Transit Planning Activities	support, route planning, training regarding capital purchases.	KAT	2015	OPER	SECTION 530	\$244,177	\$195,341	\$24,418	\$24,418	\$0		Transit
		paronacco.		2014	PUR	SECTION 530	\$100,000	\$80,000	\$10,000	\$10,000	\$0		
2014-213	Support Vehicles Purchase	Acquire replacement support vehicles.	KAT	2015	PUR	SECTION 530	\$50,000	\$40,000	\$5,000	\$5,000	\$0		Transit
2014-214	Radio replacement and additional antenna	Radio replacements and additional antenna at Knoxville Station	KAT	2014	PUR	SECTION 530	\$10,000	\$8,000	\$1,000	\$1,000	\$0		Transit
				2014	OPER	SECTION 530	\$517,328	\$258,664	\$129,332	\$129,332	\$0		
2014-215		Operating assistance to provide trips in urbanized	CAC	2014	OPER	SECTION 530	\$775,992	\$387,996	\$193,998	\$193,998	\$0		Transit
	County CAC	area.		2015	OPER	SECTION 530	\$1,632,504	\$816,252	\$408,126	\$408,126	\$0		
				2014	OPER	SECTION 530	\$176,500	\$88,250	\$44,125	\$44,125	\$0		
2014-216	Operating Assistance -	Operating assistance to provide trips in urbanized	ETHRA	2014	OPER	SECTION 530	\$353,000	\$176,500	\$88,250	\$88,250	\$0		Transit
2011210	ETHRA	area.	2111101	2015	OPER	SECTION 530	\$742,708	\$371.354	\$185,677	\$185.677	\$0		Tallot
2014-217	Evergreen Presbyterian	Purchase of 2 lowered floor minivans.	TDOT	2013	PUR	SECTION 530	\$65,948	\$52,758	\$6,595	\$6,595	\$0		Transit
2014-218	Ministries - Minivans Agape Outreach Homes -	Purchase of 2 lowered floor minivans.	TDOT	2014	PUR	SECTION 531	\$65,948	\$52.758	\$6,595	\$6,595	\$0		Transit
2014-210	Minivans		1501	2014	I OK	320110N 331	ψυ υ ,540	Ψ02,130	ψυ,υσυ	ψυ,υσυ	φυ		nanat
2014-219	Cerebral Palsy Center	Purchase of low-floor mini-vans to service for persons with significant disabilities.	TPO/MPC	2014	PUR	SECTION 531	\$175,000	\$140,000	\$17,500	\$17,500	\$0		Transit
2014-220	ETHRA - Demand Response	Continuation of demand response transportation service and support Mobility Manager and	TPO/MPC	2014	OPER	SECTION 531	\$415,910	\$207,955	\$103,978	\$103,977	\$0		Transit

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2011220	and Mobility Manager	Assistant positions previously funded under New Freedom.	3,,,,,	2014	PUR	SECTION 531	\$52,989	\$42,391	\$5,299	\$5,299	\$0		Handi
2014-221	Knox County CAC 5310 Funds	Purchase vehicles to provide transportation to elderly and disabled Knox County residents who have no other means of transportation by	TPO/MPC	2014	PUR	SECTION 531	\$240,000	\$192,000	\$24,000	\$24,000	\$0		Transit
		providing safe, reasonably comfortable transportation.		2015	PUR	SECTION 531	\$125,000	\$100,000	\$12,500	\$12,500	\$0		
2014-222	Knox County CAC - Volunteer	Continuation and expansion of Volunteer Assisted	TPO/MPC	2014	OPER	SECTION 531	\$292,000	\$146,000	\$73,000	\$73,000	\$0		Transit
	Assisted Transportation	Transportation (VAT) service for operations.		2015	OPER	SECTION 531	\$240,000	\$120,000	\$60,000	\$60,000	\$0		
2014-223	KAT - Section 5339 Funds	Capital funds for bus and bus facilities.	KAT	2014	PUR	SECTION 533	\$1,486,369	\$1,189,095	\$148,637	\$148,637	\$0		Transit
		.,		2015	PUR	SECTION 533	\$870,131	\$696,105	\$87,013	\$87,013	\$0		
		Provide convenient and secure bike parking		2015	PUR	CMAQ	\$10,000	\$8,000	\$0	\$2,000	\$10,000	Obligated	
2014-225	Bike Parking Program	destinations by reducing cost for businesses and agencies to provide bike parking for employees	TPO/MPC	2016	PUR	CMAQ	\$10,000	\$8,000	\$0	\$2,000	\$0	Not Obligated	
		and customers.		2017	PUR	CMAQ	\$10,000	\$8,000	\$0	\$2,000	\$0	Not Obligated	
2014-226	Reducing Emissions with UPS and Autogas	The project will replace 45 United Parcel Service (UPS) diesel package cars with cleaner propane autogas vehicles in Maryville and Oliver Springs.	UTK Institute for Secure and Sustainable Environ.	2015	PUR	CMAQ	\$548,119	\$427,533	\$0	\$120,586	\$0	Not Obligated	To be removed
2014-227	DHL - Driving Autogas Use for a Cleaner Metro Knoxville	The project will replace six gasoline vehicles from DHL fleet with new vehicles converted to propane fuel.	UTK Institute for a Secure and Sustainable Environ	2015	PUR	CMAQ	\$57,312	\$44,130	\$0	\$13,182	\$57,312	Obligated	Fully Obligated
2014-228	Knox County Traffic Signal	The project improves traffic signal system coordination on primary roads at 20 signalized intersections along four corridors - Lovell Rd,	Knox County	2015	PE-D	CMAQ	\$60,500	\$60,500	\$0	\$0	\$60,500	Obligated	Fully Obligated
	Coordination Project	Dutchtown Rd, Hardin Valley Rd, and S. Peters/Ebenezer Rd.	,	2015	PE-N	CMAQ	\$45,000	\$45,000	\$0	\$0	\$45,000	Obligated	.,
				2015	PE-D	CMAQ	\$120,215	\$120,215	\$0	\$0	\$0		
2014-229	Knox County Advanced Traffic Management System - Phase	traffic management system on two priority road -	Knox County	2015	PE-N	CMAQ	\$77,000	\$77,000	\$0	\$0	\$77,000	Obligated	NEPA Phase Underway
	1	Maynardville Pk and Cedar Bluff Rd.		2016	CON	CMAQ	\$1,205,000 \$25,785	\$1,205,000 \$25,785	\$0 \$0	\$0 \$0	\$0 \$0		
2014-230	Oak Ridge Signal Timing Optimization	The project is to coordinate traffic signal operations for 27 intersections on three corridors - Illinois Ave, Oak Ridge Turnpike, and Lafayette Dr.	City of Oak Ridge	2015	PE-N/PE-D/RW/CN	CMAQ	\$237,500	\$237,500	\$0	\$0	\$120,000	Obligated	Complete
2014-231	Farragut Traffic Signal Improvement Project	The project will provide signal system hardware and infrastructure improvements to facilitate signal coordination of all 26 traffic signals in town.	Town of Farragut	2015	PE-N/PE-D/RW/CN	CMAQ	\$258,000	\$258,000	\$0	\$0	\$65,000	Obligated	Design Phase Underway
		The project is to design and implement ITS signal		2015	EA	CMAQ	\$57,000	\$57,000	\$0	\$0	\$57,000	Obligated	
2014-232	Lenoir City ITS: Signal System Design	system for 20 coordinated signals along US- 321/SR-73 and US-11/SR-2.	City of Lenoir City	2015	PE-D	CMAQ	\$111,500	\$111,500	\$0	\$0	\$111,500	Obligated	Design Phase Underway
		02.1761(70 and 00 1 1761(2.		2016	CON	CMAQ	\$1,165,000	\$1,165,000	\$0	\$0	\$0	Not Obligated	
2014-233	Emory Valley Center	Section 5310 funds for the purchase of three vans.	TPO/MPC	2015	PUR	SECTION 531	\$138,866	\$111,093	\$13,886	\$13,887	\$0		Transit
2014-234	Loudon County Office On Aging	Section 5310 funds used for the purchase of one van.	TPO/MPC	2015	PUR	SECTION 531	\$29,149	\$23,319	\$2,915	\$2,915	\$0		Transit
2014-235	Ridgeview Behavioral Health	Section 5310 funds for the purchase of one van.	TPO/MPC	2016	PUR	SECTION 531	\$35,271	\$28,217	\$3,527	\$3,527	\$0		Transit
2014-236	Sertoma Center	Section 5310 funds for the purchase of three vans.	TPO/MPC	2015	PUR	SECTION 531	\$116,000	\$92,800	\$11,600	\$11,600	\$0		Transit
2014-237	Blount County CAC - Smiles Volunteer Program	Section 5310 federal funds for operating expenses to fund the Smiles volunteer assisted transportation services.	TPO/MPC	2015	OPER	SECTION 531	\$120,136	\$60,068	\$30,034	\$30,034	\$0		Transit

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2014-238	Knox County CAC - Vehicle Camera Installation	Install cameras on at least 40 existing vehicles that provide demand response transportation in Knox County	CAC	2016	PUR	L-STP	\$200,000	\$160,000	\$0	\$40,000	\$0	Obligated	Transit	
2014-300	PM 2.5 Diesel Emissions Reduction Strategies Grouping	See Appendix E: TDOT Metropolitan Groupings Definitions for a more comprehensive list of activities included but not limited for eligibility.	TDOT	2014	PUR	CMAQ - PM 2.	\$2,678,189	\$2,142,551	\$0	\$535,638	\$0	Not Obligated		
				2014	PE-D/RW/CN	PHSIP	\$2,000,000	\$2,000,000	\$0	\$0	\$1,867,000	Obligated		
				2014	PE-N/PE-D/RW/CN	HSIP	\$25,000,000	\$22,500,000	\$2,500,000	\$0	\$7,247,859	Obligated		
				2015	PE-D/RW/CN	PHSIP	\$2,750,000	\$2,750,000	\$0	\$0	\$0			
	Highway Safety Improvement	See Appendix E: TDOT Metropolitan Groupings	TD 0.T	2015	PE-N/PE-D/RW/CN	HSIP	\$3,000,000	\$2,700,000	\$300,000	\$0	\$0			
2014-301	Program (HSIP) Grouping	Definitions for a more comprehensive list of activities included but not limited for eligibility.	TDOT	2016	PE-D/RW/CN	PHSIP	\$2,600,000	\$2,600,000	\$0	\$0	\$0			
				2016	PE-N/PE-D/RW/CN	HSIP	\$3,000,000	\$2,700,000	\$300,000	\$0	\$0			
					2017	PE-D/RW/CN	PHSIP	\$500,000	\$500,000	\$0	\$0	\$0		
						2017	PE-N/PE-D/RW/CN	HSIP	\$3,000,000	\$2,700,000	\$300,000	\$0	\$0	
				2014	PE-N/PE-D/RW/CN	STP	\$12,500,000	\$10,000,000	\$2,500,000	\$0	\$7,710,103	Obligated		
2014-302	Surface Transportation	See Appendix E: TDOT Metropolitan Groupings Definitions for a more comprehensive list of	TDOT	2015	PE-N/PE-D/RW/CN	STP	\$3,000,000	\$2,400,000	\$600,000	\$0	\$0			
2014-302	Program (STP) Grouping	activities included but not limited for eligibility.	Iboi	2016	PE-N/PE-D/RW/CN	STP	\$3,000,000	\$2,400,000	\$600,000	\$0	\$0			
				2017	PE-N/PE-D/RW/CN	STP	\$3,000,000	\$2,400,000	\$600,000	\$0	\$0			
				2014	PE-N/PE-D/RW/CN	NHPP	\$36,600,000	\$29,280,000	\$7,320,000	\$0	\$32,574,538	Obligated		
	National Highway	See Appendix E: TDOT Metropolitan Groupings		2015	PE-N/PE-D/RW/CN	NHPP	\$10,000,000	\$8,000,000	\$2,000,000	\$0	\$0			
2014-303		Definitions for a more comprehensive list of activities included but not limited for eligibility.	TDOT	2016	PE-N/PE-D/RW/CN	ACNHPP	\$2,102,000	\$0	\$2,102,000	\$0	\$0			
		,		2016	PE-N/PE-D/RW/CN	NHPP	\$10,000,000	\$8,000,000	\$2,000,000	\$0	\$0			
				2017	PE-N/PE-D/RW/CN	NHPP	\$7,000,000	\$5,600,000	\$1,400,000	\$0	\$0			
				2015	OPER	CMAQ	\$231,113	\$184,890	\$46,223	\$0	\$231,113	Obligated		
2014-304	HELP Truck Expansion	To expand the existing TDOT Freeway Service Patrol Program by acquiring three new HELP trucks and three operators and by expanding	TDOT	2015	PUR	CMAQ	\$252,381	\$201,905	\$50,476	\$0	\$252,381	Obligated		
2014-304	HELP Truck Expansion rucks and three operators and by expanding routes to provide coverage and services during peak hours in the Knoxville air quality nonattainment and maintenance area.	1501	2016	OPER	CMAQ	\$231,113	\$184,890	\$46,223	\$0	\$0				
				2017	OPER	CMAQ	\$231,113	\$184,890	\$46,223	\$0	\$0			

Appendix D: Air Quality Conformity Determination

AIR QUALITY CONFORMITY DETERMINATION

FOR THE:

MobilityPlan
connecting people and places

and

FY 2017-2020 Transportation Improvement Program

Adopted by TPO Executive Board
April 26, 2017



Air Quality Conformity Determination Report for the Knoxville Regional TPO 2017 Update of the Metropolitan Long-Range Transportation Plan, known as the "Mobility Plan 2040"

and

the accompanying Knoxville Regional TPO

FY 2017-2020 Transportation Improvement Program

Prepared by:

Knoxville Regional TPO Staff

For additional information contact:

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The preparation of this report has been financed in part through grant[s] from the Federal Highway

Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning
and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S.

Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of
Transportation

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ADOPTING RESOLUTION BY KNOXVILLE REGIONAL TPO EXECUTIVE BOARD FOR MOBILITY PLAN 2040 AND AIR QUALITY CONFORMITY DETERMINATION

A RESOLUTION BY THE EXECUTIVE BOARD
OF THE KNOXVILLE REGIONAL
TRANSPORTATION PLANNING ORGANIZATION (TPO)
ADOPTING THE MOBILITY PLAN 2040 &
AIR QUALITY CONFORMITY DETERMINATION REPORT

WHEREAS, the Fixing America's Surface Transportation Act (FAST Act) requires that each MPO have a current metropolitan transportation plan; and,

WHEREAS, the guidance for the development of the metropolitan transportation plan, as found in the Final Rule for Metropolitan Transportation Planning and Programming in the Federal Register under section 23 CFR 450.322, was followed and,

WHEREAS, the metropolitan transportation plan must address all modes of transportation in an urban area, have a planning horizon of at least 20 years, and be financially constrained; and,

WHEREAS, the Clean Air Act Amendments of 1990 (CAAA) and the FAST Act require that transportation plans and programs conform to air quality goals established by the State Implementation Plan (SIP) for regions in nonattainment of an air pollution standard; and,

WHEREAS, the Knoxville Region is subject to air quality conformity requirements under the 2008 8-Hour Ozone Standard, the 1997 Annual PM2.5 Standard and the 2006 Daily PM2.5 Standard; and,

WHEREAS, an Air Quality Conformity Determination Report was prepared to quantitatively demonstrate conformity of the Mobility Plan 2040 and FY 2017-2020 Transportation Improvement Program based on the required emissions tests and using the latest emissions model from the Environmental Protection Agency; and,

WHEREAS, the TPO's public outreach and Interagency Consultation procedures were adhered to with Mobility Plan 2040 and the Air Quality Determination being circulated for public review, presented at more than two open public meetings and coordinated with stakeholder and regulatory agencies through the Interagency Consultation process; and,

WHEREAS, the TPO Technical Committee has recommended the adoption of Mobility Plan 2040; and,

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

That Mobility Plan 2040 and the Air Quality Conformity Determination Report be adopted as the basis for transportation planning decisions in the Knoxville air quality non-attainment area including the TPO Planning area.

April 26, 2017

Date

Mayor Thomas Taylor City of Maryville

TPO Executive Board Chair

Jeffrey A. Welch, AICP Director, Knoxville Regional TPO

ADOPTING RESOLUTION BY KNOXVILLE REGIONAL TPO EXECUTIVE BOARD FOR FY 2017-2020 TIP AMENDMENTS

A RESOLUTION BY THE EXECUTIVE BOARD OF THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION AMENDING THE FY 2017-2020 TRANSPORTATION IMPROVEMENT PROGRAM

WHEREAS, the FY 2017-2020 Knoxville Regional Transportation Improvement Program was adopted on October 26, 2016; and

WHEREAS, in accordance with requirements of the U.S. Department of Transportation, the elements of the transportation planning process are to receive final approval from the Executive Board of the local Metropolitan Planning Organization; and

WHEREAS, the Transportation Improvement Program must be updated as needed; and

WHEREAS, the proposed project amendments were reviewed with the Knoxville-Area Air Quality Interagency Consultation Group with respect to air quality conformity requirements and are either exempt from, or were demonstrated to conform with the federal transportation air quality conformity regulations from the Clean Air Act; and

WHEREAS, a conformity determination report with a full revised regional emissions analysis was prepared for the project amendments which concluded that air quality conformity was demonstrated; and

WHEREAS, the amended FY2017-2020 TIP was updated consistent with the Mobility Plan 2040; and

WHEREAS, the Knoxville Regional Transportation Planning Organization Technical Committee recommends approval of the Resolution, and

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

That the FY 2017-2020 Transportation Improvement Program be amended to include the following changes and that the Tennessee Department of Transportation include these amendments into the State Transportation Improvement Program:

Amendment to add the following new projects to the FY2017-2020 TIP: 17-2017-204 (Purchase KAT Vehicles - Fixed Route Buses), 17-2017-205 (KAT Implementation of ITS Technologies), 17-2017-206 (Purchase KAT Vehicles - Fixed Route Trolley Buses), 17-2017-207 (Purchase KAT Vehicles - Neighborhood Service Buses), 17-2017-208 (KAT Purchase of ADA Paratransit Vans), 17-2017-203 (ETHRA Transit Vehicle Replacement Project), 17-2014-015 (Papermill Drive Complete Street), 17-2017-017 (Magnolia Avenue Streetscape - Phase 3 and 4), 17-2017-011 (East Knox Greenway - Phase 1), 17-2017-009 (First Creek Greenway - Broadway Streetscape), 17-2017-030 (Schaad Road Extension), 17-2017-003 (Pellissippi Pkwy/Hardin Valley Interchange), 17-2017-007 (Amerine Road Improvements), 17-2017-005 (US 129 Widening), 17-2017-031 (Robert C. Jackson Drive Extension), 17-2017-006 (Maryville to Townsend Greenway - Phase 1 (Brown Creek)), 17-2017-023 (Tesla Blvd), 17-2017-004 (J. Carmichael Greer Pedestrian Bridge), 17-2017-306 (Planning and Studies Grouping), 17-2017-308 (Bike and Pedestrian Grouping), 17-2017-307 (Maintenance and Repair Grouping). The TIP project pages are in the Executive Board agenda package.

Amendment to remove 17-2014-038 (Washington Pike) and 17-2014-040 (Kingston Pike at Campbell Station Road) from the FY2017-2020 TIP. These projects are both on hold. The TIP project pages are in the Executive Board agenda package.

Amendment to add and update funding to the following projects in the FY2017-2020 TIP: 17-2014-204 (CAC Volunteer Assisted Transit Vehicle Replacement), 17-2014-037 (Pleasant Ridge Rd.), 17-2014-006 (Schaad Road Widening), 17-2014-082 (Union Road/N. Hobbs Road), 17-2014-007 (Foothills Mall Dr. Extension), and 17-2017-305 (STBG Transportation Alternatives Grouping). The new and amended TIP project pages are in the Executive Board agenda package.

Amendment to update the text of the FY2017-2020 TIP document by: adding a statement about the Highway Safety Improvement Program performance measures requirements, adding TIP programming policies that apply to projects with TPO managed grant funds only, updating description of TIP process and timeline, updating description of groupings, updating financial tables, adding acronym definitions, revising All Projects Summary Table, updating Appendix B Call for Projects Application, adding Appendix F: Transportation Alternatives Call for Projects Application, adding Appendix G April 26, 2017 TPO Executive Board TIP Amendment Resolution, and updating the graphic design of the document.

April 26, 2017 Date

Mayor Thomas Taylor

City of Maryville

TPO Executive Board Chair

Jeffrey A. Welch, AICP

Director, Knoxville Regional TPO

APPROVAL LETTER BY U.S. DOT FOR AIR QUALITY CONFORMITY DETERMINATION



Tennessee Division

May 31, 2017

404 BNA Drive, Suite 508 Nashville, Tennessee 37217 Phone (615) 781-5770

> In Reply Refer To: HDA-TN

Ms. Tanisha Hall Director, Long Range Planning Division Tennessee Department of Transportation James K. Polk Building, Suite 900 Nashville, TN 37243

Subject: Air Quality Conformity Determination for the Knoxville, TN Region

Dear Ms. Hall:

The Federal Highway Administration (FHWA) Tennessee Division and Federal Transit Administration (FTA) Region IV Office, in coordination with the Environmental Protection Agency (EPA) Region IV Office, have reviewed the Air Quality Conformity Determination the Knoxville Regional Transportation Planning Organization (TPO) Executive Board adopted on April 26, 2017.

The Air Quality Conformity Determination covers the Knoxville, TN nonattainment area for the 1997 Annual PM_{2.5} standard, the nonattainment area for the 2006 Daily PM_{2.5} standard and the maintenance area for the 2008 8-hour ozone standard and addresses the planned transportation improvements from the TPO's Mobility Plan 2040 and amended Fiscal Years 2017-2020 Transportation Improvement Program.

Based on our review, we find the documents conform to the State of Tennessee's air quality goals for the 1997 Annual PM_{2.5}, 2006 Daily PM_{2.5}, and 2008 8-hour ozone National Ambient Air Quality Standards established in the State Implementation Plan.

If you have any questions regarding this determination, please contact Sean Santalla at (615) 781-5767.

Sincerely,

Pamela M. Kordenbrock Division Administrator

Pamelonkultorock

cc: Mayor Tom Taylor, Executive Board Chair, Knoxville Regional TPO

Mr. Andres Ramirez, General Engineer, FTA Region IV

Ms. Kelly Sheckler, Environmental Scientist, EPA Region 4

Ms. Dianna Myers, Physical Scientist, EPA Region 4

EXECUTIVE SUMMARY

OVERVIEW AND PURPOSE

The Knoxville Regional Transportation Planning Organization (KRTPO) has conducted a regional emissions analysis to support an air quality conformity demonstration for the regular 4-year update to its Metropolitan Long-Range Transportation Plan (LRTP) known as the Mobility Plan 2040 and for resulting amendments to its FY 2017-2020 Transportation Improvement Program (TIP) to ensure that the TIP is a direct subset of the LRTP. The purpose of this report is to document that the updated LRTP and TIP conform to federal regulations from the latest surface transportation act known as "Fixing America's Surface Transportation Act" (FAST Act) and the Clean Air Act Amendments of 1990.

An Air Quality Conformity Determination for transportation plans and programs within the Knoxville Region is required since it is currently designated as a "Nonattainment Area" for the Particulate Matter 2.5 (PM2.5) Daily and Annual Standards and is also currently designated as a "Maintenance Area" for the 8-Hour Ozone Standard. The United States Environmental Protection Agency (EPA) sets air quality standards through the Clean Air Act in order to protect human health and the environment from unsafe levels of pollution. The transportation conformity process is used to ensure that federal funds will not be spent on projects that cause or contribute to any new violations of the National Ambient Air Quality Standards (NAAQS); increase the frequency or severity of NAAQS violations; or delay timely attainment of the NAAQS or any required interim milestone.

The Knoxville Region is currently subject to transportation conformity requirements based on the designations under three separate NAAQS in the following specific geographic locations:

- Maintenance for 2008 8-hour Ozone Standard Blount, Knox, and part of Anderson counties
- 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

There are portions of counties designated as Maintenance or Nonattainment that lie outside of the KRTPO Metropolitan Planning Area. The KRTPO compiles a single overall transportation plan that encompasses the entire Nonattainment and Maintenance areas for the purposes of demonstrating conformity for the entire region.

EMISSIONS ANALYSIS SUMMARY

In order to be able to demonstrate conformity of the TPO's transportation plans with the applicable NAAQS, a regional emissions analysis is performed using outputs from a regional transportation model and a mobile source emissions model from EPA known as "MOVES" (Motor Vehicle Emission Simulator). An estimate of emissions is generated for various required analysis years between the present year and the final year of the LRTP and compared against allowable amounts that have either been formally set as part of a State Implementation Plan known as "Motor Vehicle Emissions Budgets" (MVEB).

PM2.5 STANDARDS

The PM2.5 Nonattainment Area includes Anderson, Blount, Knox, Loudon, and a portion of Roane County. The PM2.5 air quality standard consists of two different measurement timeframes – an annual level and a daily level – based on the health effects that can occur for short-term versus long-term exposures. The Knoxville Region has been designated as nonattainment for both the daily and annual measurement periods (same geographic area for both). The designation as a nonattainment area under the Annual PM2.5 Standard became effective on April 5, 2005 and the designation as a nonattainment area for the Daily PM2.5 Standard became effective on December 14, 2009. A re-designation request to Attainment with a Maintenance Plan for both the Annual and Daily PM2.5 standards was submitted to EPA by the Tennessee Department of Environment & Conservation (TDEC) in December 2016, but final approvals of the Maintenance Plan are expected to occur subsequent to this conformity determination A process was used; however, to establish that the MVEBs are adequate for conformity purposes prior to final Maintenance Plan approval so that they could be used in this conformity determination.

1997 ANNUAL PM2.5 STANDARD

The EPA published a notice announcing a finding that the 2014 and 2028 Motor Vehicle Emissions Budgets (MVEB) for Direct PM2.5 and Oxides of Nitrogen (a PM2.5 precursor pollutant) included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 82, No. 46, page 13338 on March 10, 2017.

A regional emissions analysis was conducted using inputs consistent with both the SIP and other latest planning assumptions, which are documented in Chapter 2 of this report. The computed emissions from on-road mobile sources compared against the MVEB in the 1997 Annual PM2.5 Maintenance Area for the analysis years of 2022, 2028 (interpolated), 2030 and 2040 are shown in Table 1.

Table 1: MVEB Test for 1997 Annual PM2.5 Standard

	Analysis Year			
Direct Particulate Matter 2.5:	2022	2028	2030	2040
MVEB	444.78	245.00	245.00	245.00
Projected Emissions	206.05 ✓	173.50 ✓	162.66 ✓	168.24 ✓

Oxides of Nitrogen (NOx):	2022	2028	2030	2040
MVEB	15,597.73	7,171.14	7,171.14	7,171.14
Projected Emissions	6,587.70 ✓	4,742.80 ✓	4,127.83 ✓	3,541.51 ✓

(emissions in tons per year)

2006 DAILY PM2.5 STANDARD

The EPA published a notice announcing a finding that the 2014 and 2028 Motor Vehicle Emissions Budgets (MVEB) for Direct PM2.5 and Oxides of Nitrogen (a PM2.5 precursor pollutant) included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 82, No. 46, page 13347 on March 10, 2017.

A regional emissions analysis was conducted using inputs consistent with both the SIP and other latest planning assumptions, which are documented in Chapter 2 of this report. The computed emissions from on-road mobile sources compared against the MVEB in the 2006 Daily PM2.5 Maintenance Area for the analysis years of 2022, 2028 (interpolated), 2030 and 2040 are shown in Table 2.

Table 2: MVEB Test for 2006 Daily PM2.5 Standard

	Analysis Year			
Direct Particulate Matter 2.5:	2022	2028	2030	2040
MVEB	1.22	0.67	0.67	0.67
Projected Emissions	0.56 ✓	0.48 🗸	0.45 ✓	0.46 ✓

Oxides of Nitrogen (NOx):	2022	2028	2030	2040
MVEB	42.73	19.65	19.65	19.65
Projected Emissions	18.05 ✓	12.99 ✓	11.31 ✓	9.70 ✓

(emissions in tons per day)

In summary, the emissions analysis performed by the KRTPO demonstrates that the projected emissions from the proposed transportation system are less than the allowable amount for each of the required analysis years and thus conformity for the 2008 8-Hour Ozone, Annual PM2.5, and Daily PM2.5 standards has been demonstrated for the affected current transportation plans and the project amendments thereto.

The conformity determination was coordinated with stakeholder and regulatory agencies through an Interagency Consultation process and a 30-day public review and comment period was held. A summary of comments that were received and responses is included in the report.

2008 OZONE STANDARD

The nonattainment designation for the 2008 8-hour Ozone Standard became effective on July 20, 2012. A redesignation request to Attainment with a Maintenance Plan was submitted to EPA by the Tennessee Department of Environment and Conservation (TDEC) in November 2014 and approved by EPA on July 13, 2015 with an

effective date of August 12, 2015. Therefore, as of August 12, 2015 the Knoxville Region is considered a "Maintenance Area" for the 2008 Ozone Standard.

The EPA published a notice announcing a finding that the 2011 and 2026 Motor Vehicle Emissions Budgets (MVEB) for NOx and VOC included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 80, No. 133, page 39970 on July 13, 2015.

A regional emissions analysis was conducted using inputs consistent with both the SIP and other latest planning assumptions, which are documented in Chapter 2 of this report. The computed emissions from on-road mobile sources compared against the MVEB in the 2008 Ozone Maintenance Area for the analysis years of 2022, 2026 (interpolated), 2030 and 2040 are shown in Table 3.

Table 3: MVEB Test for 2008 Ozone Standard

	Analysis Year			
Volatile Organic Compounds (VOC):	2022	2026	2030	2040
MVEB	19.71	10.49	10.49	10.49
Projected Emissions	7.82 ✓	6.59 ✓	5.36 ✓	4.23 ✓
Oxides of Nitrogen (NOx):	2022	2026	2030	2040
MVEB	41.62	17.69	17.69	17.69
Projected Emissions	12.62 ✓	9.96 ✓	7.30 ✓	5.81 ✓

(emissions in tons per day)

CHAPTER 1 - INTRODUCTION AND BACKGROUND INFORMATION

1.0 INTRODUCTION

The primary purpose of this document is to demonstrate that update to the Knoxville TPO Metropolitan Long Range Transportation Plan, known as "Mobility Plan 2040" and the Knoxville Regional Transportation Planning Organization (KRTPO) FY 2017-2020 Transportation Improvement Program (TIP) meet Transportation/Air Quality Conformity requirements of the Clean Air Act and Fixing America's Surface Transportation Act (FAST Act).

Federal Transportation Planning Regulations (23 CFR 450) require Metropolitan Planning Organizations to prepare a comprehensive Long Range Transportation Plan (LRTP) that covers a minimum 20-year horizon. The LRTP is required to be updated every four years in order to ensure that the underlying planning assumptions are still valid. The TPO is also required to prepare a four-year program of projects known as a Transportation Improvement Program (TIP) that must be consistent with the approved LRTP.

1.1 BACKGROUND ON TRANSPORTATION CONFORMITY

Transportation Conformity is required in nonattainment and maintenance areas by federal regulations (40 CFR Parts 51 and 93) and is the mechanism through which on-road mobile source emissions are addressed in the area's goals for cleaner air. The air quality conformity process is used to ensure that federal funds will not be spent on projects that cause or contribute to any new violations of the National Ambient Air Quality Standards (NAAQS); increase the frequency or severity of NAAQS violations; or delay timely attainment of the NAAQS or any required interim milestone. The CAA requires that metropolitan transportation plans, metropolitan transportation improvement programs (TIPs) and Federal projects conform to the purpose of the State Implementation Plan (SIP), which details the emissions levels from each sector including mobile sources needed to regain compliance with the air quality standard. If conformity is not demonstrated then the area may enter what is known as a conformity "lapse" period, which can trigger highway sanctions by the EPA under the authority of the Clean Air Act (CAA) meaning only very specific projects may move forward, while funding is essentially frozen for most new roadway construction or widening projects. Under section 179(b)(1) of the CAA, once EPA imposes highway sanctions the FHWA may not approve or award any grants in the sanctioned area except those that are specifically exempted such as safety and air quality improvement projects that do not encourage single occupancy vehicle capacity. The conformity regulations in 40 CFR 93.104(f) allow for a 12-month lapse grace period during which projects that were in the most recent conforming plan and TIP can continue to move forward, but new non-exempt projects cannot be added.

The general criteria and procedures for determining conformity of transportation plans (in this case both the LRTP and TIP) are described in 40 CFR 93.109 as:

- Latest Planning Assumptions (40 CFR 93.110)
- Latest Emissions Model (40 CFR 93.111)
- Consultation (40 CFR 93.112)
- TCMs (40 CFR 93.113)
- Emissions Budget (40 CFR 93.118)

Subsequent sections of this report document the assumptions, model inputs and procedures used to satisfy the above requirements in conducting the regional emissions analysis to demonstrate transportation conformity for the Mobility Plan 2040 and amendments to the FY 2017-2020 TIP.

1.2 SUMMARY CHRONOLOGY OF RECENT TRANSPORTATION PLAN CONFORMITY FINDINGS

Transportation planning is a continuous process that is carried out by the Knoxville Regional TPO and its member jurisdiction and agency partners. The LRTP and TIP are living documents that undergo required major updates at regular intervals along with other interim updates as required due to specific project amendments or changing priorities. The LRTP is currently updated on a 4-year cycle while the TIP is updated on a 3-year cycle. The LRTP and TIP must remain consistent with one another at all times, which means that any project amendments that occur or there is a major Plan update then a new conformity finding is required. Following is a summary of the most recent 4-year cycle of Plan updates leading up to the current action which is to conduct a regional emissions analysis and conformity finding for the update to the LRTP:

- 2013 Update of the LRTP, known as the "Long Range Regional Mobility Plan 2040" Conformity approval of full regional emissions analysis on **May 31, 2013**.
- FY 2014 2017 TIP Conformity approval of "short conformity report" relying on previous regional emissions analysis on **November 22, 2013.**
- Amendments to FY 2014 2017 TIP Conformity approval of new regional emissions analysis for nonexempt, regional significant project changes on March 26, 2015.
- Amendment to FY 2014 2017 TIP Conformity approval of new regional emissions analysis for Ozone since a new MVEB was in place and reliance of previous regional emissions analysis for PM2.5 on October 19, 2015.
- FY 2017 2020 TIP Conformity approval of "short conformity report" relying on previous regional emissions analyses on **December 1, 2016**.

1.3 BACKGROUND ON THE KNOXVILLE REGION OZONE AND PM2.5 MAINTENANCE AREAS

The Clean Air Act requires the United States Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six "Criteria Pollutants" — Particulate Matter, Ozone, Nitrogen Dioxide, Carbon Monoxide, Sulfur Dioxide, and Lead in order to protect human health and the environment from unsafe levels of these pollutants. These pollutants are regulated through the EPA setting maximum limits on exposure levels that must be reviewed periodically. Regions, which are found to be out of compliance with those limits, may be designated as a "Nonattainment Area".

Most of the Knoxville Region has recently been, or is currently in non-attainment for two criteria pollutants (ground-level ozone and fine particulate matter) under federal NAAQS with detailed history of EPA designations for Ozone and PM2.5 following below.

1.3.1 OZONE

The region's first nonattainment designation for ground-level ozone became effective in January 1992 under the "1-Hour Ozone Standard" and included only Knox County. The area was able to demonstrate attainment with that standard effective in October 1993 and was then considered a "Maintenance Area".

EPA promulgated a more stringent ozone standard in 1997 known as the "1997 8-Hour Ozone Standard" which was set at 80 parts per billion (ppb). The EPA designated the counties of Anderson, Blount, Jefferson, Knox, Loudon, Sevier, and a portion of Cocke within the Great Smoky Mountains National Park in non-attainment of the 1997 8-hour standard for ground level ozone. This nonattainment designation became effective on June 15, 2004. The area demonstrated attainment with this standard effective in March 2011.

EPA again strengthened the ozone standard in 2008 based on an updated review of scientific and medical data to ensure that air quality standards are set at an appropriate level to protect the environment and human health. This standard is known as the "2008 8-hour Ozone Standard" and it was set at 75 ppb. A formal designation of nonattainment areas for this standard became effective on July 20, 2012 and included the counties of Blount and Knox plus a portion of Anderson County surrounding the TVA Bull Run Fossil Plant. The area demonstrated attainment with this standard effective in August 2015.

The current Knoxville Region Maintenance Area for the 2008 8-Hour Ozone Standard is shown in Figure 1 below:

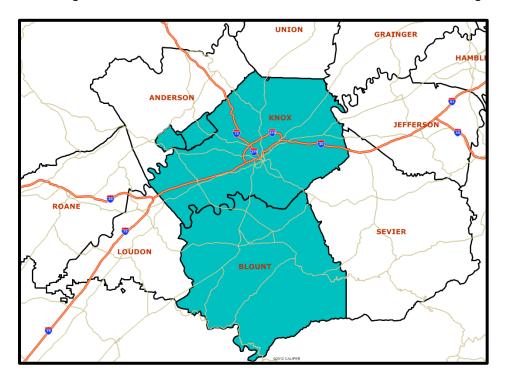


Figure 1: Knoxville 8-Hour Ozone Maintenance Area

1.3.2 PM2.5

The EPA first promulgated air quality standards for fine particulate matter less than 2.5 microns in diameter (PM2.5) in 1997 due to evidence that these fine particles pose a significant health risk because of their ability to lodge deeply within the lungs. The EPA set standards on both a daily (65 micrograms/cubic meter) and an annual (15 micrograms/cubic meter) basis for levels of PM2.5.

On April 5, 2005, the EPA formally designated the counties of Anderson, Blount, Knox, Loudon, and a portion of Roane in non-attainment for the 1997 Annual PM2.5 Standard. As a result of the PM2.5 designation, the TPO updated the Mobility Plan in 2006, expanding the Knoxville Region to include that portion of Roane County not included in the original Plan and prepared an updated conformity determination.

EPA strengthened the PM2.5 standard in 2006 by reducing the permissible daily levels of PM2.5 from 65 to 35 micrograms per cubic meter. The same counties that were designated under the 1997 Annual PM2.5 Standard were formally designated nonattainment for the 2006 Daily PM2.5 Standard effective December 2009.

The current Knoxville Region Nonattainment Areas for the 1997 and 2006 PM2.5 Standards is shown in Figure 2 below:

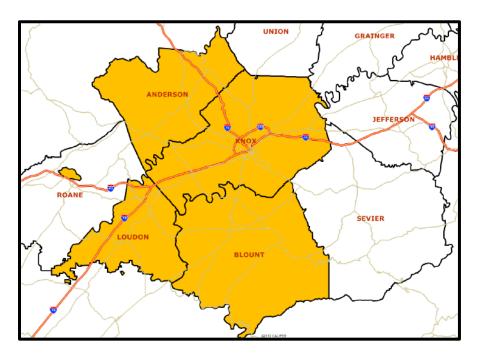


Figure 2: Knoxville PM2.5 Nonattainment Area

1.4 EMISSIONS ANALYSIS BACKGROUND

Transportation Conformity is demonstrated through a technical process known as an "emissions analysis", in which future estimates of emissions from the transportation system are compared against what has been determined to be sufficient to allow the area to re-attain the air quality standard. Different types of emissions are involved in the production of Ozone and PM2.5 pollution as described below:

- Ozone: Ozone is not directly emitted into the atmosphere; rather it is formed through a chemical reaction between "Volatile Organic Compounds" (VOC) and "Oxides of Nitrogen" (NOx) in the presence of sunlight. Mobile-sources contribute both sources of emissions – VOC are primarily formed from the evaporation of motor fuel, while NOx is formed from the internal combustion process and emitted in vehicle exhaust.
- **PM 2.5:** There are some PM2.5 emissions, known as "Direct PM2.5", that are directly emitted from motor vehicles. Direct PM2.5 emissions consist of elements contained in vehicle exhaust as well as particles resulting from brake and tire wear. In addition, it is believed that NOx emissions can contribute to secondary formation of PM2.5 so it is included in the emissions analysis.

1.5 EMISSIONS ANALYSIS PROCEDURE

The emissions analysis is performed primarily using two different models – a Travel Demand Forecasting Model (TDFM), developed by the KRTPO and the MOVES2014a mobile source emissions model, which was developed by the EPA and allows the user to input localized parameters. The TDFM provides outputs of the estimated Vehicle Miles of Travel (VMT) on the transportation system and associated average speeds by functional classification. The MOVES2014a model uses the activity data from the TDFM and combines it with other inputs describing the analysis area to derive an overall emissions amount. This procedure is known as the "Inventory Mode" of MOVES2014a, which was chosen for this analysis as opposed to the "Emission Rate Mode" of MOVES2014a, which produces emissions rates that must be subsequently post processed with the TDFM activity data.

Appendix B of this document describes the MOVES2014a input structure that was used in the emissions analysis.

Finally, the emissions analysis must also be performed for different years throughout the life of the LRTP. Since the timeframe covered by the LRTP is from 2017-2040, and MVEBs are available for both Ozone and PM2.5, 40 CFR part 93.118 establishes the required analysis years and emissions tests. In general, the required analysis years include:

- Attainment Year for applicable pollutants
- Last Year of the maintenance plan for applicable pollutants
- Any other years for which the maintenance plan establishes budgets
- Last year of the timeframe of the conformity determination
- Years such that there are no more than 10 years between analysis years

If any of the above required analysis years are not within the timeframe of the conformity determination, i.e. a year in the past, then it does not need to be included. Additionally, the emissions in years for which consistency with MVEBs must be demonstrated may be determined by interpolating between the years for which the regional emissions analysis is performed.

Following are the analysis years that were selected to meet the above requirements for this conformity analysis:

- 2022 First Analysis Year, Year no greater than 10 years apart
- 2026 Last Year of 2008 Ozone Standard Maintenance Plan (interpolated)
- 2028 Last Year of the 1997 Annual and 2006 Daily PM2.5 Standards Maintenance Plan (interpolated)
- 2030 Year no greater than 10 years apart
- 2040 Last Year of Transportation Plan

2.0 INTRODUCTION

An important component of the conformity determination is to ensure that the latest planning assumptions are used in developing the inputs to both the regional travel demand model, which provides the majority of the activity data (vehicle speeds and miles driven) for the various analysis years and the emissions rate model, which requires other locality-specific characteristics. The planning assumptions for this conformity determination were discussed through the Interagency Consultation (IAC) process as required by 40 CFR 93.105, and the draft planning assumptions document provided to the IAC is included in Appendix C. The following sections of this chapter summarize the primary planning assumptions used to support the regional emissions analysis that was conducted as part of this conformity determination.

2.1 PLANNING ASSUMPTIONS FOR DEVELOPING TRAVEL DEMAND FORECASTS:

A full model update was finalized in 2012, which was validated to a 2010 base year. A minor update was conducted for the 2017 LRTP development in which only the input variable and external traffic data sources were modified, but the underlying travel behavior relationships were unchanged. The model has been re-validated to a base year of 2014 to coincide with the latest available traffic and land use data at the time of the model update development and all standard FHWA validation targets have been achieved. Following is a summary of the travel model development and additional information regarding model validation is included in Appendix G of the main 2040 Mobility Plan.

The model outputs for total vehicle miles of travel (VMT) by roadway functional classification have been compared against the estimated actual amount of VMT as reported to FHWA for the Highway Performance Monitoring System (HPMS) and appropriate HPMS adjustment factors have been developed to ensure accurate replication of the amount of travel in the region. The travel demand model encompasses a total of 10 counties in the Knoxville Region and includes the entirety of the previously noted maintenance/nonattainment areas as shown on figures 1 and 2.

The county-level data for base year 2014 population and household characteristics is primarily derived from the U.S. Census Bureau's inter-censal Population Estimates data and American Community Survey (ACS) whereas employment data was obtained through various sources such as the Bureau of Economic Analysis (BEA) and Bureau of Labor Statistics (BLS). The future year 2040 county-level population and employment control totals were developed through a review of available sources of projection data including proprietary data from Woods & Poole Economics, the University of Tennessee Center for Business & Economic Research and previous custom projections developed by a consultant for the TPO. It was determined that the most appropriate source of future year projections remained the previously developed custom set and this recommendation was endorsed for use in preparation of the 2017 LRTP Update by the TPO Executive Board at its August 26, 2015 meeting.

The travel demand model summarizes socioeconomic characteristics (population, employment, household income, etc) into sub-county geographic units of somewhat homogenous land use known as Traffic Analysis Zones (TAZ). The county-level estimates for the base and future analysis years must be allocated to the TAZs. In the case of the base year, population data from the 2010 decennial census is available at very small geographic units known as Census Blocks which are aggregated to the TAZ-level. The net change in population for each county between 2010

and 2014 was then allocated based on recent trends in residential building permit activity. Employment data was allocated based on a proprietary data set known as InfoGroup obtained through TDOT, which provides detailed establishment level information of employment counts by industry type geocoded to its actual location.

The allocation of future year county-level control totals for population and employment represents a significant challenge in terms of attempting to predict the exact locations of growth, which is subject to many various market factors and unforeseen events such as a major auto manufacturer deciding to locate in a previously undeveloped area. A land use allocation modeling tool was developed for the TPO as part of a previous planning effort funded under the HUD Sustainable Communities Initiative grant known as "Plan East Tennessee" (PlanET). Since economic conditions have not changed significantly since this tool's development and the KRMP is maintaining the same future out year of 2040 it was decided to rely again on the allocation results from the trend scenario that was developed for PlanET. The trend scenario was developed to serve as a base "business-as-usual" case to compare against other types of future land use scenarios that were considered such as a transit oriented development scenario of more clustered and mixed use growth than that which as occurred over the recent past which is primarily auto-oriented. The allocation results were updated to reflect the most recent "approved development" information, which are major new residential and commercial projects that have been previously announced and are likely to develop over the short term.

2.2 LATEST EMISSIONS MODEL:

The EPA officially released an emissions factor model known as "MOVES2014" through a Federal Register Notice of Availability on October 7, 2014, which set a 2-year grace period for its use instead of the prior version known as "MOVES2010b". There have been subsequent minor updates to MOVES2014 that have been released by EPA and the most recent version available at the time of this conformity analysis is the "November 2016 Update to MOVES2014a". The input default database for the latest version of MOVES2014a used to determine the total onroad emissions of the pollutants of concern for this conformity analysis is known as "movesdb20161117".

2.3 EMISSIONS TESTS:

The emissions tests used for this conformity analysis follow the requirements listed in 40 CFR 93.118 based on the fact that a Motor Vehicle Emissions Budget (MVEB) is available for all pollutants. The following sub-sections of this chapter document the specific MVEBs for each pollutant and note their applicability in terms of the analysis years that were selected as documented in Section 1.5.

2.3.1 FOR 1997 "ANNUAL" PM2.5 STANDARD

The emissions test for the 1997 Annual PM2.5 Standard is based on an MVEB set for both an interim year (2014) and the last year of the Maintenance Plan (2028). The EPA published a notice announcing a finding that the 2014 and 2028 Motor Vehicle Emissions Budgets (MVEB) for Direct PM2.5 and Oxides of Nitrogen (a PM2.5 precursor pollutant) included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 82, No. 46, page 13338 on March 10, 2017. Table 4 shows the MVEB for the 1997 Annual PM2.5 Standard:

Table 4: MVEB for 1997 Annual PM2.5 Standard

	2014	2028
Pollutant	(tons,	/year)
PM2.5	444.78	245.00
NOx	15,597.73	7,171.14

The emissions tests are performed for the analysis years previously identified in Section 1.5 of this report of 2022, 2028, 2030 and 2040. Analysis years prior to 2028 (the 2022 analysis year) use the MVEB for 2014 while all other analysis years are compared against the MVEB for 2028.

2.3.2 FOR 2006 "DAILY" PM2.5 STANDARD

The EPA published a notice announcing a finding that the 2014 and 2028 Motor Vehicle Emissions Budgets (MVEB) for Direct PM2.5 and Oxides of Nitrogen (a PM2.5 precursor pollutant) included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 82, No. 46, page 13347 on March 10, 2017. The same discussion as above for the 1997 Annual PM2.5 Standard applies to the Daily Standard and the MVEB is essentially the same except the annual emissions budget is simply converted to a daily emissions budget by dividing it by 365. Table 5 shows the MVEB for the 2006 Daily PM2.5 Standard:

Table 5: MVEB for 2006 Daily PM2.5 Standard

	2014	2028	
Pollutant	(tons/day)		
PM2.5	1.22	0.67	
NOx	42.73	19.65	

The emissions tests are performed for the analysis years previously identified in Section 1.5 of this report of 2022, 2028, 2030 and 2040. Analysis years prior to 2028 (the 2022 analysis year) use the MVEB for 2014 while all other analysis years are compared against the MVEB for 2028.

2.3.3 FOR 2008 8-HOUR OZONE STANDARD

The emissions test for the 2008 8-Hour Ozone Standard is based on an MVEB set for both an interim year (2011) and the last year of the Maintenance Plan (2026). The EPA published a notice announcing a finding that the 2011 and 2026 Motor Vehicle Emissions Budgets (MVEB) for NOx and VOC included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 80, No. 133, page 39970 on July 13, 2015. Table 6 shows the MVEB for the 2008 Ozone Standard:

Table 6: MVEB for 2008 Ozone Standard

	2011	2026
Pollutant	(tons	/day)
VOC	19.71	10.49
NOx	41.62	17.69

The emissions tests are performed for the analysis years previously identified in Section 1.5 of this report of 2022, 2026, 2030 and 2040. Analysis years prior to 2026 (the 2022 analysis year) use the MVEB for 2011 while all other analysis years are compared against the MVEB for 2026.

2.4 MOVES2014A INPUTS AND RUNSPEC DEVELOPMENT:

In order to set up a MOVES2014a model run the user must first define the "run specification" or "Runspec" for short, which establishes the specific model domain such as the county, time period, road types, vehicle types and pollutants being modeled for. Following the Runspec, the user enters specific input data for the county being modeled through an interface known as a "County Data Manager". The County Data Manager allows inputs for a variety of characteristics affecting emissions generation including the number of vehicles, vehicle miles of travel, average speeds, meteorological information, fuel types and average vehicle fleet age by vehicle type among others. The following sub-sections detail the Runspec and County Data Manager parameters used for this conformity analysis.

2.4.1 MOVES2014A RUNSPEC PARAMETERS

The MOVES model run is first set up based on a number of parameters to define the appropriate geographic scale and other aspects of the modeling domain to be utilized in the analysis, which is referred to as a "run specification" or runspec for short. Following is a list of the MOVES runspec panels and how they are proposed to be set up for the KRMP conformity analysis and based on appropriate technical guidance documentation from EPA:

1.) Scale:

Both Pollutants – County level scale – Inventory mode

2.) Time Spans:

- Both Pollutants Year (separate runs for each required analysis year 2022, 2030 and 2040), by Hour, all hours
- Ozone July weekday
- PM2.5 All months, all days

3.) Geographic Bounds:

- Ozone Anderson (partial), Blount and Knox counties
- PM2.5 Anderson, Blount, Knox, Loudon and Roane (partial) counties

4.) Vehicles/Equipment:

Both Pollutants – Gasoline, CNG, ethanol (E85) and diesel fuels, all valid vehicle combinations

5.) Road Type:

• Both Pollutants – All road types

6.) Pollutants and Processes:

- Ozone NOx and VOC and all other required supporting prerequisite pollutants
- PM2.5 Primary PM2.5 (exhaust, brake and tire wear), NOx and all supporting prerequisite pollutants
- Note unchecked the "Refueling Displacement Vapor Loss" and "Refueling Spillage Loss" to exclude refueling emissions that are instead included in the Area source emissions inventory.

7.) Output options:

- Both Pollutants
 - General Output tab: Units = grams, joules, miles; Activity: checked "Distance Traveled" and "Population"
 - o Output Emissions Detail tab: checked "Road Type" and "Source Use Type"

2.4.2 MOVES2014A COUNTY DATA MANAGER INPUT DEVELOPMENT

For the locality-specific inputs required in the "County Data Manager" section of MOVES, the following general information is being provided for how they were developed, additional technical details and example input files are provided in Appendix B.

CDM 1.) Meteorology – this input consists of locality specific values of temperature and humidity covering the required analysis time frame, i.e. summer months for Ozone and all months for annual PM2.5. It is generally required that the conformity analysis must use consistent inputs for meteorology that were developed for an applicable SIP and its MVEBs. The meteorology inputs for the Ozone Redesignation Request were developed by TDEC and are based on data gathered at the Knoxville Airport and averaged over the period from 2009 to 2011. Similarly, the PM2.5 meteorology inputs come directly from the PM2.5 Maintenance Plan which were based on average temperature and humidity data for the three-year period from 2012 to 2014.

CDM2.) Source Type Population – this input defines the vehicle population within the study area by type of vehicle and must be generated using local-specific data. This input has been generated for a base year of 2014 by researchers from the Department of Civil and Environmental Engineering at the University of Tennessee, Knoxville under contract to the Tennessee Department of Transportation using a combination of county-level motor vehicle registration data from the Tennessee Department of Revenue, surveys of local school districts and transit agencies on bus ownership and national default ratios to determine vehicle counts of those vehicles not included in the motor vehicle registration database such as long-haul trucks. In order to forecast future-year projections of Source

Type Population for the light duty vehicle source types the Knoxville TPO's travel demand model was utilized to develop growth factors from its vehicle ownership model. All other source type growth factors were based on the projected employment growth percentage. Special attention has to be applied to the partial counties of Anderson (for Ozone) and Roane (for PM2.5) to ensure that only the vehicles garaged in those specific areas are included.

CDM3.) Age Distribution – vehicle age distribution datasets were also recently developed for year 2014 by the University of Tennessee in MOVES format that are utilized for all analysis years of 2014 and beyond.

CDM4.) Vehicle Type VMT – this MOVES input actually consists of four separate input files related to the estimated vehicle miles of travel in the area being analyzed including:

- a.) HPMSVTypeYear this is the total amount of VMT estimated for each of the analysis years by Source Type. A base year value was developed by UT for 2014 and growth factors by major source type provided by the KRTM are used to develop the future year estimates.
- b.) Month this input accounts for the variability in travel throughout the months of the year. These inputs were developed by UT from traffic count data collected by TDOT.
- c.) Day this input accounts for the differences in weekday travel versus weekend travel and are also available from the UT study.
- d.) Hour this input accounts for the hourly variation in travel and is provided by the KRTM using a post processing software tool known as PPSUITE.

CDM5.) Average Speed Distribution – this input was developed for all future years using the KRTM and the PPSUITE post processing tool, which formats the travel model outputs on network speeds into the appropriate MOVES2014a format.

CDM6.) Road Type Distribution – this input provides the distribution of VMT on each road type by source type. This input was developed by UT for 2014 and will be held constant for the future year analyses.

CDM7.) Ramp Fractions – this input is derived from the TPO's travel demand model and post processing tool PPSUITE to determine the percent VHT spent on urban and rural restricted access ramps.

CDM8.) Fuel Type and Technology – this input is provided by TDEC based on EPA guidance to reflect fuels used in the Knoxville Region. Transit fleet data from Knoxville Area Transit (KAT) was used to develop fuel type profiles for transit buses (sourceType 42), which consist only of gasoline and diesel fuel vehicles (no CNG).

CDM9.) Fuel Formulation and Supply – this input has also been previously developed by TDEC as established in SIP preparation efforts for both Ozone and the draft PM2.5 Redesignation request. It is proposed to utilize the inputs from the draft PM2.5 documentation as being the most recent available.

CDM10.) Starts – local information for this input is not currently available and therefore MOVES defaults are utilized.

CDM11.) I/M Programs – this is not applicable to the Knoxville Region as it does not currently have any inspection and maintenance programs.

CHAPTER 3: MOBILE SOURCE EMISSIONS ANALYSIS AND APPLICABLE GOVERNING REGULATIONS

3.0 INTRODUCTION

The Metropolitan Planning Regulations of the FAST Act (23 CFR Parts 450 and 771, May 27, 2016) and the USEPA Transportation Conformity Rule (40 CFR Parts 51 and 93, August 15, 1997 and amended most recently on March 14, 2012) specify certain minimum requirements that must be addressed in performing a mobile source emissions analysis in order to determine conformity of a Long Range Transportation Plan (LRTP). The following sections in this chapter discuss these requirements and how they were addressed by the KRTPO in making the determination of conformity on the Mobility Plan 2040.

3.1 REGULATIONS RELATED TO DEVELOPMENT OF LRTP AND TRANSPORTATION CONFORMITY

The Metropolitan Planning Regulations found in 23 CFR Part 450 specify the content of Long Range Transportation Plans and relevant aspects related to Transportation Conformity.

- 23 CFR 450.322(a) The LRTP must have a minimum 20-year planning horizon. The LRTP covers the period of 2017-2040, which meets the requirement for a minimum 20-year planning horizon. The LRTP is known as the Mobility Plan 2040.
- 23 CFR 450.322(b)(6) The LRTP must "include design concept and scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of the source of funding, in nonattainment and maintenance areas to permit conformity determinations under the U.S. EPA conformity regulations at 40 CFR part 51. In all areas, all proposed improvements shall be described in sufficient detail to develop cost estimates". The project list included in the Mobility Plan document and in Appendix D covers the necessary detail and project scopes to develop cost estimates as accurately as possible.
- 23 CFR 450.322(b)(11) The LRTP must "include a financial plan that demonstrates the consistency of proposed transportation investments with already available and projected sources of revenue..." The Mobility Plan 2040 main document contains a financial analysis that demonstrates financial constraint.

3.2 REGULATIONS GOVERNING MOBILE SOURCE EMISSIONS ANALYSES

The Transportation Conformity Rule was first promulgated by EPA on November 24, 1993 (58 FR 62188). It has subsequently been amended several times to cover changes such as the implementation of the 1997 8-Hour Ozone and PM2.5 National Ambient Air Quality Standards on July 1, 2004. The most recent amendment to the Transportation Conformity Rule was published in the Federal Register on March 14, 2012 (75 FR 14979), which was a restructuring of several sections such that the Conformity Rule would not need to be revised each time a new or revised NAAQS is issued by EPA. Applicable guidelines from the Transportation Conformity Rule and how they have been addressed in this conformity determination are as follows:

- 40 CFR 93.106(a) The transportation plan must specifically describe the transportation system
 envisioned for certain future years, which are called horizon years and are subject to the following
 restrictions:
 - The horizon years may be no more than 10 years apart;

- The first horizon year may not be more than 10 years from the base year used to validate the transportation demand planning model;
- o If the attainment year is in the time span of the transportation plan, the attainment year must be a horizon year, and;
- The last horizon year must be the last year of the transportation plan's forecast period.

The base year for validation of the KRTPO's transportation demand planning model is 2014 and the KRMP's forecast period is from 2017 to 2040. Therefore, the analysis years used in developing the conformity analysis are:

3.2.1 FOR OZONE (2008 STANDARD):

Analysis Years

- 2022 First horizon year within 10 years from base year used to validate the transportation demand planning model
- 2026 Final year of the Maintenance Plan
- 2030 Year such that there are no more than 10 years between analysis years
- 2040 Final year of Mobility Plan 2040

3.2.2 FOR PM2.5 (DAILY AND ANNUAL STANDARDS):

Analysis Years

- 2022 First horizon year within 10 years from base year used to validate the transportation demand planning model
- 2028 Final year of the Maintenance Plan
- 2030 Year such that there are no more than 10 years between analysis years
- 2040 Final year of Mobility Plan 2040

The analysis years were discussed and determined to be appropriate in the Interagency Consultation process.

• 40 CFR 93.106(a)(2)(i) – The transportation plan shall quantify and document the demographic and employment factors influencing the expected transportation demand.

The summary of county-level estimates of socioeconomic data and growth projections for all study years is available upon request. The travel demand model used the following socioeconomic characteristics in order to determine estimates of travel for each analysis year:

- Total Population
- Household Population
- Group Quarters Population
- Number of Households
- Average Persons per Household
- Average Median Household Income
- Workers per Household

- Vehicles per Household
- Students per Household
- School Enrollment (K-12)
- University Student Enrollment
- Total Employment
- Basic Employment
- Industrial Employment
- Retail Trade Employment
- Services Employment

Further information regarding the development of the transportation model socioeconomic data is presented in Section 2.1 and Appendix G of the Mobility Plan document.

• 40 CFR 93.106(a)(2)(i) – The highway and transit system shall be described in terms of the regionally significant additions or modifications to the existing transportation network which the transportation plan envisions to be operational in the horizon years.

The transportation system is described in the travel demand model through a GIS-based network of links and nodes with attributes describing the character of roadway. Some of the key attributes that were used to account for the improvement projects that are being proposed include:

- FHWA Functional Classification
- Divided or Un-divided Roadway
- Level of Access Control
- Number of Lanes in each direction
- Lane Width
- Posted Speed Limit
- Area Type (Rural, Suburban, Urban or Major Employment District)

Transit mode usage is also estimated as part of the travel demand model as it relates to the fixed route transit service that is provided by Knoxville Area Transit (KAT).

- 40 CFR 93.110 The conformity determination must be based upon the most recent planning
 assumptions in force at the time of the conformity determination. The KRTPO documented its
 assumptions and planning data with the Interagency Consultation Group, which is summarized in the
 meeting information included in the Appendix C. The demographic and transportation modeling
 assumptions are documented in Chapter 2.
- **40 CFR 93.111** The conformity determination must be based on the latest emission estimation model available. This conformity determination utilized the most recent available version of MOVES the November 2016 update of MOVES2014a, with default database "movesdb20161117".

- 40 CFR 93.112 The conformity determination must satisfy consultation requirements in the applicable implementation plan. Chapter 5 and documentation in the appendix relate to the interagency consultation process.
- 40 CFR 93.118 and 93.119 Motor vehicle emissions budget and other applicable conformity tests that
 must be used. Chapter 4 of this report documents the emissions tests that were used to demonstrate
 conformity. The emissions tests were discussed in the Interagency Consultation process to determine
 their appropriateness.
- 40 CFR 93.122 Procedures for determining transportation-related emissions. The TPO documented its
 assumptions and methodology for determining future growth in vehicle miles of travel on the regionally
 significant transportation system with the Interagency Consultation Group. The primary source for
 projecting future vehicle activity is the travel demand forecasting model, which includes all regionally
 significant roadways and represents all regionally significant highway projects being proposed for
 implementation in the Mobility Plan 2040 and FY 2017-2020 TIP by analysis year. All counties in the
 nonattainment area are represented in the travel demand model.
- 40 CFR 93.126 and 93.127 Projects exempt from regional emissions analysis. The highway project list included in the Appendix D of this document describes which projects were determined to be exempt from air quality analysis. These projects were deliberated through the Interagency Consultation process to ensure that there was full agreement on the exempt status for projects.

Examples of exempt projects include:

- Bridge Replacement Project A project that only entails rehabilitating or replacing the existing bridge inkind without any additional laneage being constructed.
- Pedestrian Improvement Project
- Interchange Reconfiguration Project
- Intersection Project This could include any type of project that involves only a single intersection such as adding turn lanes (channelization) or a traffic signal.
- Street Lighting
- Pavement Resurfacing
- Reconstruction of a 2-lane roadway, which is only improving the width and geometrics of the roadway and perhaps some additional turn lanes.

3.3 AVAILABILITY OF TECHNICAL INFORMATION RELATED TO EMISSIONS ANALYSES

Additional information regarding specific MOVES2014a emissions model inputs and outputs and travel demand model assumptions is available upon request.

CHAPTER 4 – STATEMENT OF CONFORMITY

4.0 INTRODUCTION

This section of the report covers the conformity requirements for the Knoxville Region under both the 8-Hour Ozone Standard as well as the PM2.5 Standard. The conformity report complies with all applicable requirements found in the State Implementation Plan (SIP), Clean Air Act, Tennessee Transportation Conformity Regulation and the MPO Planning Regulations from FAST ACT (23 CFR 450.322).

4.1 STATEMENT OF CONFORMITY - 1997 ANNUAL PM2.5 STANDARD

The PM2.5 Nonattainment Area includes Anderson, Blount, Knox, Loudon, and a portion of Roane County surrounding the TVA Kingston Fossil Plant (2000 Census Block Group 47-145-0307-2). The PM2.5 air quality standard consists of two different measurement timeframes – an annual level and a daily level – based on the health effects that can occur for short-term versus long-term exposures. The Knoxville Region has been designated as nonattainment for both the daily and annual measurement periods. The designation as a nonattainment area under the Annual PM2.5 Standard became effective on April 5, 2005 and the designation as a nonattainment area for the Daily PM2.5 Standard became effective on December 14, 2009. A re-designation request to "Maintenance" status for both the Annual and Daily standards are currently pending final approval by EPA; however, the MVEBs included in the pending Maintenance plans have already been formally deemed as "adequate for transportation conformity" as noted previously in this report.

The Annual PM2.5 conformity analysis consists of an MVEB test for the annual PM2.5-related emissions from onroad mobile sources resulting from components such as brake and tire wear and vehicle exhaust known as "Direct PM2.5" and "Oxides of Nitrogen" (NOx) which can act as precursors to PM2.5 formation. An emissions analysis was conducted for the required analysis years of 2022, 2028, 2030 and 2040, with year 2028 being interpolated between 2022 and 2030. Table 9 below summarizes the MVEB test for all analysis years: The results of the emissions analysis are summarized in Table 7:

Table 7: MVEB Test for 1997 Annual PM2.5 Standard

Analysis Year				
2022	2028	2030	2040	
444.78	245.00	245.00	245.00	
206.05 ✓	173.50 ✓	162.66 ✓	168.24 ✓	
Oxides of Nitrogen (NOx): 2022 2028 2030 2				
2022	2028	2030	2040	
15,597.73	7,171.14	7,171.14	7,171.14	
	444.78 206.05 ✓ 2022	2022 2028 444.78 245.00 206.05 ✓ 173.50 ✓ 2022 2028	2022 2028 2030 444.78 245.00 245.00 206.05 ✓ 173.50 ✓ 162.66 ✓ 2022 2028 2030	

6.587.70 🗸

4.742.80 🗸

4.127.83

(emissions in tons per year)

Projected Emissions

3.541.51 🗸

4.1.1 SUMMARY OF 1997 ANNUAL PM2.5 STANDARD CONFORMITY ANALYSIS

Based on the quantitative conformity analysis the KRTPO staff has determined that the Mobility Plan 2040 and the KRTPO FY 2017-2020 TIP demonstrate conformity for the 1997 Annual PM2.5 Standard using the necessary emissions tests. Compliance with the regulations of the Clean Air Act, 40 CFR Parts 51 and 93 (Transportation Conformity Rule) and 23 CFR Part 450 (Metropolitan Planning Regulations established by FAST Act) has also been demonstrated.

4.2 STATEMENT OF CONFORMITY - 2006 DAILY PM2.5 STANDARD

The Daily PM2.5 conformity analysis consists of an MVEB test for the annual PM2.5-related emissions from onroad mobile sources resulting from components such as brake and tire wear and vehicle exhaust known as "Direct PM2.5" and "Oxides of Nitrogen" (NOx) which can act as precursors to PM2.5 formation. An emissions analysis was conducted for the required analysis years of 2022, 2028, 2030 and 2040, with year 2028 being interpolated between 2022 and 2030. The results of the emissions analysis are summarized in Table 8:

Table 8: MVEB Test for 2006 Daily PM2.5 Standard

	Analysis Year				
Direct Particulate Matter 2.5:	2022 2028 2030 2040				
2008 Baseline Year Emissions	1.22	0.67	0.67	0.67	
Projected Emissions	0.56 ✓	0.48 🗸	0.45 ✓	0.46 ✓	

Oxides of Nitrogen (NOx):	2022	2028	2030	2040
2008 Baseline Year Emissions	42.73	19.65	19.65	19.65
Projected Emissions	18.05 ✓	12.99 ✓	11.31 ✓	9.70 ✓

(emissions in tons per day)

4.2.1 SUMMARY OF 2006 DAILY PM2.5 STANDARD CONFORMITY ANALYSIS

Based on the quantitative conformity analysis the KRTPO staff has determined that the Mobility Plan 2040 and the KRTPOFY 2017-2020 TIP demonstrate conformity for the 2006 Daily PM2.5 Standard using the necessary emissions tests. Compliance with the regulations of the Clean Air Act, 40 CFR Parts 51 and 93 (Transportation Conformity Rule) and 23 CFR Part 450 (Metropolitan Planning Regulations established by FAST Act) has also been demonstrated.

4.3 STATEMENT OF CONFORMITY - 2008 OZONE STANDARD

The nonattainment designation for the 2008 Ozone Standard became effective on July 20, 2012 and included the counties of Blount, Knox and the portion of Anderson County surrounding the TVA Bull Run Fossil Plant (2000 Census Tracts 202 and 213.02). A re-designation to Attainment for this Standard was approved by EPA through a Federal Register notice on July 13, 2015 and made effective on August 12, 2015. The conformity analysis documented in this report utilizes the newly approved Motor Vehicle Emissions Budgets (MVEB).

An emissions analysis was conducted for the required analysis years of 2022, 2026, 2030 and 2040, with year 2026 being interpolated between 2022 and 2030. Table 9 below summarizes the MVEB test for all analysis years:

Table 9: MVEB Test for 2008 Ozone Standard

	Analysis Year			
Volatile Organic Compounds (VOC):	2022	2026	2030	2040
MVEB	19.71	10.49	10.49	10.49
Projected Emissions	7.82 ✓	6.59 ✓	5.36 ✓	4.23 ✓

Oxides of Nitrogen (NOx):	2022	2026	2030	2040
MVEB	41.62	17.69	17.69	17.69
Projected Emissions	12.62 ✓	9.96 ✓	7.30 ✓	5.81 ✓

(emissions in tons per day)

4.3.1 SUMMARY OF 2008 8-HOUR STANDARD CONFORMITY ANALYSIS

Based on the quantitative conformity analysis the KRTPO staff has determined that the Mobility Plan 2040 and the KRTPOFY 2017-2020 TIP demonstrate conformity for the 2006 Daily PM2.5 Standard using the necessary emissions tests. Compliance with the regulations of the Clean Air Act, 40 CFR Parts 51 and 93 (Transportation Conformity Rule) and 23 CFR Part 450 (Metropolitan Planning Regulations established by FAST Act) has also been demonstrated.

CHAPTER 5 - INTERAGENCY CONSULTATION

5.0 INTRODUCTION

The Transportation Conformity Rule in 40 CFR Part 93.105 requires that Interagency Consultation be a part of conformity determinations. Interagency Consultation allows for formal deliberation of any issues that arise as part of the conformity analysis and allows for input from all stakeholder agencies into the process. Specific consultation procedures are specified in the Tennessee Transportation Conformity Regulation found in 1200-3-34-.01(3) of the Tennessee State Code.

5.1 PARTICIPATING AGENCIES

The core list of Interagency Consultation Participants included representatives from the following agencies:

- Knoxville Regional TPO
- Knox County Department of Air Quality Management
- Tennessee Department of Transportation
- Tennessee Department of Environment & Conservation
- Federal Highway Administration
- United States Environmental Protection Agency
- Federal Transit Administration
- Lakeway Area Metropolitan TPO
- Great Smoky Mountains National Park Service

A list of participant names is included in Appendix C.

5.2 OVERVIEW OF CONSULTATION PROCESS

The development of this conformity determination was coordinated with the Interagency Consultation group. The process began with discussion of latest planning assumptions and required model inputs on an IAC conference call held on November 3, 2016. Subsequent calls were held to further discuss various assumptions and to review drafts of the emissions analysis and documentation. Appendix C contains the minutes of each of the interagency meetings as well as comments and responses to the draft Conformity Determination Report.

6.0 CONCLUSION

The analysis included in this report has demonstrated that the KRTPO Mobility Plan 2040 and accompanying FY 2017-2020 Transportation Improvement Program are in conformity with air quality regulations found in the Clean Air Act Amendments of 1990 and FAST Act.

Although Vehicle Miles of Travel are projected to increase steadily in the future, the corresponding emissions rates from vehicles are expected to decrease even more significantly according to the modeling performed by the KRTPO. It should be noted however that the downward trend in emissions does start to slow and even start to curve back upward for the direct PM2.5 emissions after the year 2030 (see Figure 6-1 below).

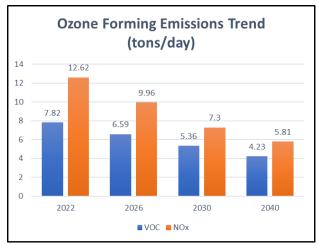




Figure 3: Emissions Trends for Life of Mobility Plan 2040

The primary reason that emission rates are projected to decline is due to stricter tailpipe emission standards enacted by EPA, most notably the "Tier 2" standards that were enacted in 1999 and phased in between 2004 to 2009. The Tier Two standards represented a 77 to 86 percent reduction in nitrogen oxide emissions for cars and a 92 to 95 percent reduction for trucks from previous standards. A primary mechanism used to reduce emissions was through the reduction in fuel sulfur levels (both gasoline and diesel). More recently a new "Tier 3" standards have been promulgated in 2014 that will be phased in beginning in 2017 that will further address tailpipe emissions from motor vehicles. The MOVES model incorporates these regulations into its calculations and determines their impacts, which increase over time as the vehicle fleet turns over and includes more of the vehicles affected by the new regulations.

6.1 TRANSPORTATION CONTROL MEASURES

Currently there are no transportation control measures (TCMs) in the Tennessee SIP for the Knoxville 8-hour ozone and PM2.5 nonattainment areas. However, should TCMs be introduced in the area, nothing in the KRMP nor the Transportation Improvement Program will prohibit the timely implementation of any that are approved in the SIP for the Knoxville area.

6.2 PUBLIC INVOLVEMENT SUMMARY

The Knoxville Regional TPO conducted a 30-day comment period between March 26, 2017 and April 26, 2017 to allow for public review and comment on the 2040 Mobility Plan and accompanying Air Quality Conformity Determination. Public hearings were held on April 11, 2017 and April 26, 2017.

Copies of the Conformity Determination Report were made available on the KRTPO web site. Public notice and advertisements for the hearings and locations to view the draft conformity determination report were placed in newspapers including: The Knoxville News Sentinel, Maryville Daily Times, The Oak Ridger, The Clinton Courier, News-Herald (Loudon County), Mountain Press, Enlightener (paper targeted toward minority population), Knoxville Knox County Focus (no cost paper) and Mundo Hispano (paper targeted toward Hispanic population).

6.3 PUBLIC COMMENT AND RESPONSE

No public comments on this air quality conformity determination were received.

APPENDIX A – EMISSIONS SUMMARIES BY COUNTY

A.1 EMISSIONS FOR THE 2008 8-HOUR OZONE STANDARD ANALYSIS

Table A-1 – Volatile Organic Compounds (VOC) emissions summary (tons per day) by county for 2008 8-Hour Ozone Standard

	VOC Emissions (tons per day)						
		Analys	is Year				
	2022	2022 2026 2030 2040					
Anderson (partial)	0.27	0.22	0.17	0.11			
Blount	2.05	1.70	1.36	0.96			
Knox	5.50	4.67	3.83	3.15			
Total	7.82	6.59	5.36	4.23			

Table A-2 – Oxides of Nitrogen (NOx) emissions summary (tons per day) by county for 2008 8-Hour Ozone Standard

	NOx Emissions (tons per day)					
	Analysis Year					
	2022	2022 2026 2030 2040				
Anderson (partial)	0.29	0.21	0.14	0.07		
Blount	2.18	1.66	1.14	0.69		
Knox	10.15	8.09	6.02	5.05		
Total	12.62	9.96	7.30	5.81		

A.3 EMISSIONS FOR THE 1997 ANNUAL PM2.5 AND 2006 DAILY PM2.5 STANDARDS

Table A-3 –MOVES Emissions Outputs for Annual Direct PM2.5 Emissions by County

	Direct PM2.5 Emissions (tons per year)					
	Analysis Year					
	2022	2022 2028 2030 2040				
Anderson	20.87	16.96	15.66	15.57		
Blount	27.15	23.34	22.07	23.34		
Knox	134.50 114.39 107.68 111.64					
Loudon	22.35	17.94	16.47	16.97		
Roane (partial)	1.17	0.87	0.77	0.72		
Total	206.05	173.50	162.66	168.24		

Table A-4 –MOVES Emissions Outputs for Annual NOx Emissions by County

	NOx Emissions (tons per year) Analysis Year					
	2022	, i				
Anderson	1,002.73	782.63	709.26	652.35		
Blount	792.36	516.21	424.16	270.99		
Knox	3,725.98	2,615.49	2,245.33	1,917.09		
Loudon	1,024.19	801.66	727.48	684.62		
Roane (partial)	42.45	26.81	21.59	16.46		

Total 6,587.70 4,742.80 4,127.83 3,541.51

Table A-5 –MOVES Emissions Outputs for Daily Direct PM2.5 Emissions by County

	Direct PM2.5 Emissions (tons per day)						
	2022	Analysis Year 2022 2028 2030 2040					
Anderson	0.06	0.05	0.04	0.04			
Blount	0.07	0.06	0.06	0.06			
Knox	0.37	0.37 0.31 0.30 0.31					
Loudon	0.06	0.05	0.05	0.05			
Roane (partial)	0.00	0.00	0.00	0.00			
Total	0.56	0.48	0.45	0.46			

Table A-6 –MOVES Emissions Outputs for Daily NOx Emissions by County

	NOx Emissions (tons per day)						
		Analysis Year					
	2022	2028	2030	2040			
Anderson	2.75	2.14	1.94	1.79			
Blount	2.17	2.17 1.41 1.16 0.74					
Knox	10.21	7.17	6.15	5.25			
Loudon	2.81	2.20	1.99	1.88			
Roane (partial)	0.12	0.07	0.06	0.05			

Total	18.05	12.99	11.31	9.70

APPENDIX B - MOVES2014A INPUT DEVELOPMENT DOCUMENTATION

B.1 BACKGROUND

General information regarding the MOVES2014 runspec and county data manager input development was provided in Section 2.4 of this report. The purpose of this appendix is to provide additional details and example input files used for the county data manager. Several of the inputs were derived as part of other efforts, primarily the development of the onroad mobile source emissions inventories to support both recent Redesignation Requests and Maintenance Plans for Ozone and PM2.5 prepared by the Tennessee Department of Environment & Conservation (TDEC). A primary source of inputs utilized by TDEC was from a report and research conducted by the University of Tennessee, Knoxville Department of Civil & Environmental Engineering, titled "Methodology for Developing Input Datasets for the MOVES Model", August 2014. These additional reference materials are not repeated in this document, but are available upon request.

B.2 MOVES COUNTY DATA MANAGER INPUT DATA SOURCES

Several of the following data sets required for MOVES are extremely large and impossible to fully copy into the following sections. Some of the smaller datasets, or parts of datasets for illustration, are included in this document and general descriptions of how each were derived are provided as well, with full data sets being available upon request to KRTPO staff.

B.2.1 METEOROLOGY

Meteorology defined in a relevant SIP for which a MVEB is being used should be incorporated into the relevant analysis. The meteorology inputs (temperature and humidity) were developed and documented by TDEC in the Redesignation Requests and Maintenance Plans for both Ozone and PM2.5 following the appropriate EPA Technical Guidance. The Ozone inputs are based on an average of 3-years between 2009-2011 while the PM2.5 inputs are based on a 3-year average spanning 2012-2014. This input is the same for all counties and all analysis years for the applicable pollutant.

B.2.2 SOURCE TYPE POPULATION

Source type (i.e., vehicle type) population is used by MOVES to calculate start and evaporative emissions. In MOVES, start and resting evaporative emissions are related to the population of vehicles in an area. Since vehicle type population directly determines start and evaporative emission, users must develop local data for this input. MOVES classifies vehicles based on the way vehicles are classified in the Federal Highway Administration's HPMS (Highway Performance Monitoring System) rather than on the way they are classified in the EPA's emissions regulations. MOVES categorizes vehicles into 13 source types, which are subsets of 6 HPMS vehicle types.

As noted previously, the data for this input was obtained from U.T. which developed county level estimates of source type population for all 95 counties in Tennessee for the year 2014. Source type population projections for future years were based on growth in household vehicle ownership derived from the Knoxville Regional TPO's Travel Demand Model (TDM). The TDM has a vehicle ownership sub-model that allocates vehicle ownership based on population. The vehicle ownership is used in helping the TDM determine vehicle mode choice and vehicle activity. As people population increases, the TDM adjusts the vehicle ownership in accordance with population growth. The change in passenger vehicle population is used to grow motorcycle, passenger car and passenger truck (source types 11, 21 and 31) populations derived from vehicle registration data. Source type population for the remaining source types was grown using employment growth projections from the travel demand model.

Since there are two partial counties included within the nonattainment/maintenance areas for the Knoxville Region, special attention was paid to those areas to develop the sub-area source type populations for the specific affected areas. The partial county analyses affected the following areas:

- Anderson County Partial Area included in the 2008 8-hour Ozone Nonattainment Areas covering the
 portion of Anderson County surrounding the TVA Bull Run Fossil Plant, which corresponds to Anderson
 County 2000 Census Tracts 202 and 213.02.
- Roane County Partial Area included in the 1997 Annual and 2006 Daily PM2.5 Nonattainment Areas covering the portion of Roane County surrounding the TVA Kingston Fossil Plant, which corresponds to 2000 Census Block Group 471450307002

In order to develop the partial area source type populations, the 2010 Census data was reviewed to determine the percentage of both population and household vehicle ownership for the partial areas versus the entirety of each county. This review demonstrated that generally both people population and vehicle population percentages were relatively consistent so the most conservative values were chosen. A value of 21% was used for the Anderson County partial area and a value of 1.3% was chosen for the Roane County partial area, which is consistent with the approach taken in the development of the Maintenance Plans.

Table B-1 on the following pages shows the projected growth rates of source type population for all counties in the study area:

Table B-1 – Source Type Population Growth by County 2014 - 2040

	Vehicle Type	MOVES sourceType ID	Source Type Population 2014	2022 Growth Factor	Source Type Population 2022	2030 Growth Factor	Source Type Population 2030	2040 Growth Factor	Source Type Population 2040
	Motorcycle	11	533	1.048	559	1.117	595	1.201	640
	Passenger Car	21	8,181	1.048	8,573	1.117	9,138	1.201	9,825
		31	6,848	1.048	7,177	1.117	7,649	1.201	8,225
a a	Passenger Truck Light Commercial Truck	32	943	1.136	1,071	1.279	1,206	1.467	1,383
äti		41	0		- 1,0/1		-		-
<u>ه</u> >	Intercity Bus	41	-	1.136 1.136		1.279 1.279	-	1.467 1.467	
Ę	Transit Bus				- 21				- 20
္ရ	School Bus	43	19	1.136	21	1.279	24	1.467	28
rsor	Refuse Truck	51	7	1.136	8	1.279	8	1.467	10
Anderson County (partial)	Single Unit Short-haul Truck	52	248	1.136	282	1.279	318	1.467	364
₹	Single Unit Long-haul Truck	53	9	1.136	10	1.279	11	1.467	13
	Motor Home	54	51	1.136	58	1.279	65	1.467	74
	Combination Short-haul Truck	61	101	1.136	115	1.279	130	1.467	149
	Combination Long-haul Truck	62	112	1.136	127	1.279	143	1.467	164
	Anderson County (Partial) Total	S	17,052		18,001		19,287		20,875
	Motorcycle	11	2,538	1.048	2,660	1.117	2,835	1.201	3,048
	Passenger Car	21	38,956	1.048	40,826	1.117	43,514	1.201	46,786
_	Passenger Truck	31	32,610	1.048	34,175	1.117	36,425	1.201	39,165
Anderson County (whole)	Light Commercial Truck	32	4,489	1.136	5,100	1.279	5,741	1.467	6,585
× ×	Intercity Bus	41	1	1.136	1	1.279	1	1.467	1
nty	Transit Bus	42	-	1.136	-	1.279	-	1.467	-
, n	School Bus	43	90	1.136	102	1.279	115	1.467	132
uo:	Refuse Truck	51	32	1.136	36	1.279	40	1.467	46
ders	Single Unit Short-haul Truck	52	1,183	1.136	1,344	1.279	1,513	1.467	1,735
Ā	Single Unit Long-haul Truck	53	42	1.136	47	1.279	53	1.467	61
	Motor Home	54	242	1.136	275	1.279	309	1.467	355
	Combination Short-haul Truck	61	483	1.136	549	1.279	618	1.467	709
	Combination Long-haul Truck	62	533	1.136	606	1.279	682	1.467	783
	Anderson County Totals		81,198		85,721		91,846		99,406
	Motorcycle	11	5,024	1.142	5,737	1.325	6,657	1.55	7,787
	Passenger Car	21	51,652	1.142	58,987	1.325	68,439	1.55	80,061
	Passenger Truck	31	54,328	1.142	62,043	1.325	71,985	1.55	84,208
	Light Commercial Truck	32	7,862	1.112	8,743	1.239	9,741	1.417	11,140
₹	Intercity Bus	41	1	1.112	1	1.239	1	1.417	1
Blount County	Transit Bus	42	-	1.112	-	1.239	-	1.417	-
t C	School Bus	43	155	1.112	172	1.239	192	1.417	220
no <u>l</u>	Refuse Truck	51	30	1.112	33	1.239	37	1.417	43
	Single Unit Short-haul Truck	52	2,200	1.112	2,446	1.239	2,726	1.417	3,117
	Single Unit Long-haul Truck	53	49	1 112	EΛ	1.239	61	1.417	69
	Single office Long Hadri Track	33	73	1.112	54	1.233	01	1.717	- 05
	Motor Home	54	320	1.112	356	1.239	396	1.417	453
									1
	Motor Home	54	320	1.112	356	1.239	396	1.417	453
	Motor Home Combination Short-haul Truck	54 61	320 300	1.112 1.112	356 334	1.239 1.239	396 372	1.417 1.417	453 425
	Motor Home Combination Short-haul Truck Combination Long-haul Truck	54 61	320 300 320	1.112 1.112	356 334 356	1.239 1.239	396 372 396	1.417 1.417	453 425 453
	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals	54 61 62	320 300 320 122,241	1.112 1.112 1.112	356 334 356 139,262	1.239 1.239 1.239	396 372 396 161,003	1.417 1.417 1.417	453 425 453 187,977
	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle	54 61 62 11	320 300 320 122,241 8,817	1.112 1.112 1.112 1.144	356 334 356 139,262 10,087	1.239 1.239 1.239 1.325	396 372 396 161,003 11,683	1.417 1.417 1.417 1.553	453 425 453 187,977 13,693
	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle Passenger Car	54 61 62 11 21	320 300 320 122,241 8,817 171,062	1.112 1.112 1.112 1.114 1.144	356 334 356 139,262 10,087 195,695	1.239 1.239 1.239 1.325 1.325	396 372 396 161,003 11,683 226,657	1.417 1.417 1.417 1.553 1.553	453 425 453 187,977 13,693 265,659
>	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle Passenger Car Passenger Truck	54 61 62 11 21 31	320 300 320 122,241 8,817 171,062 140,750	1.112 1.112 1.112 1.114 1.144 1.144	356 334 356 139,262 10,087 195,695 161,018	1.239 1.239 1.239 1.325 1.325 1.325	396 372 396 161,003 11,683 226,657 186,494	1.417 1.417 1.417 1.553 1.553 1.553	453 425 453 187,977 13,693 265,659 218,585
unty	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle Passenger Car Passenger Truck Light Commercial Truck	54 61 62 11 21 31 32	320 300 320 122,241 8,817 171,062 140,750 24,722	1.112 1.112 1.112 1.144 1.144 1.144 1.162	356 334 356 139,262 10,087 195,695 161,018 28,727	1.239 1.239 1.239 1.325 1.325 1.325 1.325	396 372 396 161,003 11,683 226,657 186,494 32,954	1.417 1.417 1.417 1.553 1.553 1.553	453 425 453 187,977 13,693 265,659 218,585 38,393
: County	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle Passenger Car Passenger Truck Light Commercial Truck Intercity Bus	54 61 62 11 21 31 32 41	320 300 320 122,241 8,817 171,062 140,750 24,722 6	1.112 1.112 1.112 1.144 1.144 1.144 1.162 1.162	356 334 356 139,262 10,087 195,695 161,018 28,727	1.239 1.239 1.239 1.325 1.325 1.325 1.333 1.333	396 372 396 161,003 11,683 226,657 186,494 32,954	1.417 1.417 1.417 1.553 1.553 1.553 1.553	453 425 453 187,977 13,693 265,659 218,585 38,393
nox County	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle Passenger Car Passenger Truck Light Commercial Truck Intercity Bus Transit Bus	54 61 62 11 21 31 32 41 42	320 300 320 122,241 8,817 171,062 140,750 24,722 6	1.112 1.112 1.112 1.144 1.144 1.144 1.162 1.162	356 334 356 139,262 10,087 195,695 161,018 28,727 7	1.239 1.239 1.239 1.325 1.325 1.325 1.333 1.333	396 372 396 161,003 11,683 226,657 186,494 32,954 8	1.417 1.417 1.417 1.553 1.553 1.553 1.553 1.553 1.553 1.553	453 425 453 187,977 13,693 265,659 218,585 38,393 9
Knox County	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle Passenger Car Passenger Truck Light Commercial Truck Intercity Bus Transit Bus School Bus	54 61 62 11 21 31 32 41 42 43	320 300 320 122,241 8,817 171,062 140,750 24,722 6 153 383	1.112 1.112 1.112 1.144 1.144 1.144 1.162 1.162 1.162	356 334 356 139,262 10,087 195,695 161,018 28,727 7 178 445	1.239 1.239 1.239 1.325 1.325 1.325 1.333 1.333 1.333	396 372 396 161,003 11,683 226,657 186,494 32,954 8 204 511	1.417 1.417 1.417 1.553 1.553 1.553 1.553 1.553	453 425 453 187,977 13,693 265,659 218,585 38,393 9 238 595
Knox County	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle Passenger Car Passenger Truck Light Commercial Truck Intercity Bus Transit Bus School Bus Refuse Truck	54 61 62 11 21 31 32 41 42 43 51	320 300 320 122,241 8,817 171,062 140,750 24,722 6 153 383 184	1.112 1.112 1.112 1.144 1.144 1.144 1.162 1.162 1.162 1.162	356 334 356 139,262 10,087 195,695 161,018 28,727 7 178 445	1.239 1.239 1.239 1.325 1.325 1.325 1.333 1.333 1.333 1.333	396 372 396 161,003 11,683 226,657 186,494 32,954 8 204 511 245	1.417 1.417 1.417 1.553 1.553 1.553 1.553 1.553 1.553 1.553 1.553	453 425 453 187,977 13,693 265,659 218,585 38,393 9 238 595
Knox County	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle Passenger Car Passenger Truck Light Commercial Truck Intercity Bus Transit Bus School Bus Refuse Truck Single Unit Short-haul Truck	54 61 62 11 21 31 32 41 42 43 51 52	320 300 320 122,241 8,817 171,062 140,750 24,722 6 153 383 184 7,683	1.112 1.112 1.112 1.144 1.144 1.162 1.162 1.162 1.162 1.162 1.162	356 334 356 139,262 10,087 195,695 161,018 28,727 7 178 445 214 8,928	1.239 1.239 1.239 1.325 1.325 1.325 1.333 1.333 1.333 1.333 1.333	396 372 396 161,003 11,683 226,657 186,494 32,954 8 204 511 245 10,241	1.417 1.417 1.417 1.553 1.553 1.553 1.553 1.553 1.553 1.553 1.553	453 425 453 187,977 13,693 265,659 218,585 38,393 9 238 595 286 11,932
Knox County	Motor Home Combination Short-haul Truck Combination Long-haul Truck Blount County Totals Motorcycle Passenger Car Passenger Truck Light Commercial Truck Intercity Bus Transit Bus School Bus Refuse Truck Single Unit Short-haul Truck Single Unit Long-haul Truck	54 61 62 11 21 31 32 41 42 43 51 52 53	320 300 320 122,241 8,817 171,062 140,750 24,722 6 153 383 184 7,683 271	1.112 1.112 1.112 1.144 1.144 1.144 1.162 1.162 1.162 1.162 1.162 1.162	356 334 356 139,262 10,087 195,695 161,018 28,727 7 178 445 214 8,928 315	1.239 1.239 1.239 1.325 1.325 1.325 1.333 1.333 1.333 1.333 1.333 1.333	396 372 396 161,003 11,683 226,657 186,494 32,954 8 204 511 245 10,241 361	1.417 1.417 1.417 1.553 1.553 1.553 1.553 1.553 1.553 1.553 1.553 1.553 1.553	453 425 453 187,977 13,693 265,659 218,585 38,393 9 238 595 286 11,932 421

Table B-1 - Continued

	Vehicle Type	MOVES sourceType ID	Source Type Population 2014	2022 Growth Factor	Source Type Population 2022	2030 Growth Factor	Source Type Population 2030	2040 Growth Factor	Source Type Population 2040
	Motorcycle	11	1,784	1.176	2,098	1.404	2,505	1.685	3,006
	Passenger Car	21	21,973	1.176	25,840	1.404	30,850	1.685	37,025
	Passenger Truck	31	22,856	1.176	26,879	1.404	32,090	1.685	38,512
	Light Commercial Truck	32	2,869	1.138	3,265	1.318	3,781	1.575	4,519
-⊈	Intercity Bus	41	1	1.138	1	1.318	1	1.575	2
u no	Transit Bus	42	-	1.138	-	1.318	-	1.575	-
Loudon County	School Bus	43	57	1.138	65	1.318	75	1.575	90
ğ	Refuse Truck	51	42	1.138	48	1.318	55	1.575	66
3	Single Unit Short-haul Truck	52	1,061	1.138	1,207	1.318	1,398	1.575	1,671
	Single Unit Long-haul Truck	53	47	1.138	53	1.318	62	1.575	74
	Motor Home	54	246	1.138	280	1.318	324	1.575	387
	Combination Short-haul Truck	61	667	1.138	759	1.318	879	1.575	1,051
	Combination Long-haul Truck	62	750	1.138	854	1.318	989	1.575	1,181
	Loudon County Totals		52,353		61,349		73,009		87,584
	Motorcycle	11	21	1.098	23	1.217	26	1.365	29
	Passenger Car	21	268	1.098	294	1.217	326	1.365	366
	Passenger Truck	31	271	1.098	298	1.217	330	1.365	370
a a	Light Commercial Truck	32	34	1.101	37	1.219	41	1.376	47
är	Intercity Bus	41	0	1.101	-	1.219	-	1.376	-
(<u>.</u>	Transit Bus	42	0	1.101	-	1.219	-	1.376	-
Į į	School Bus	43	1	1.101	1	1.219	1	1.376	1
၂ ပိ	Refuse Truck	51	0	1.101	-	1.219	-	1.376	-
Roane County (partial)	Single Unit Short-haul Truck	52	11	1.101	12	1.219	13	1.376	15
œ	Single Unit Long-haul Truck	53	1	1.101	1	1.219	1	1.376	1
	Motor Home	54	3	1.101	3	1.219	4	1.376	4
	Combination Short-haul Truck	61	7	1.101	8	1.219	9	1.376	10
	Combination Long-haul Truck	62	7	1.101	8	1.219	9	1.376	10
	Roane County (Partial) Totals		624		685		760		853

B.2.3 AGE DISTRIBUTION

The EPA strongly recommends the use of local specific data for vehicle age distribution as it can vary greatly for various areas based on a number of factors. This input is important because of the fact that older vehicles generally exhibit higher emissions than newer vehicles due to fewer controls required to meet newer emissions standards and deterioration of other emissions control systems components. The Age Distribution inputs for this regional emissions analysis were obtained from U.T. as developed based on year 2014 motor vehicle registration data for each county, which were used for all analysis years.

B.2.4 VEHICLE TYPE VEHICLE MILES TRAVELED (VMT)

MOVES defines roadways into five different functional types: Off-Network, Rural Restricted Access, Rural Unrestricted Access, Urban Restricted Access and Urban Unrestricted Access. The TPO's Travel Demand Model uses a different roadway classification system, however it is easily converted to the MOVES road types as the Restricted categories involve roadways with no direct access such as Interstates and the Unrestricted road type

includes all other types of roadways. The Vehicle Miles Traveled (VMT) from the TDM were then aggregated into the respective MOVES road types

The Knoxville Regional TPO's TDM predicts average weekday traffic volumes for all arterials and collectors and some major local roads in the 10-county modeling region. The model's roadway network covers over 7,500 lane miles in total over an area of 3,725 square miles represented by 1,186 traffic analysis zones. The current version of the model also predicts the Knoxville Area Transit (KAT) average weekday system ridership and the number of average weekday bicycle and pedestrian trips within the region. All current nonattainment/maintenance area counties are included in the TDM with the exception of the Cocke County partial 8-hour ozone maintenance area.

The methodology used to grow VMT to the future analysis years was to compare the base year 2011 VMT developed from actual traffic count data and reported by the Tennessee Department of Transportation for the federal Highway Performance Monitoring System (HPMS) to the travel demand model VMT. Correction factors for the model volume were developed and then subsequently applied to the growth rates exhibited for each future network year of the travel demand model based on changes in population and proposed transportation projects included in the Long Range Transportation Plan.

The travel demand model forecasts VMT growth for four different vehicle types of: Passenger Vehicles, Four-Tire Commercial Vehicles, Single-Unit Trucks and Multi-Unit Trucks. Growth factors for each vehicle type were applied to the base year data separately. Spreadsheets were used for each analysis year and county. Figure B-1 below shows an example VMT growth calculator spreadsheet used to develop the 2040 VMT for Knox County.

Figure B-1 – Example VMT Growth Calculator Spreadsheet for 2040 Knox County VMT Knox County						
		D 2045)	ı			
HPMS Vtype Yea	er 2014 (Original From UT	December 2015):				
CountyID	HPMSVtypeID	yearID	HPMSBaseYearVMT			
47093		2014	29,532,294	•		
47093	25	2014	4,822,272,035			
47093	40	2014	4,304,486			
47093	50	2014	107,579,518			
47093	60	2014	427,431,382			
Knox 2014 TDM	Passenger Vehicles	4 Tire Comm Veh	SU	MU	Total	
TOTAL VMT	10,800,442.61	142,883.50	299,797.11	705,105.81	11,948,229.03	
Knox 2040 TDM	Passenger Vehicles	4 Tire Comm Veh	SU	MU	Total	
TOTAL VMT	15,676,716.50	214,188.45	434,174.39	981,523.63	17,306,602.97	
TOTAL VIVII	13,070,710.30	214,100.43	454,174.55	301,323.03	17,300,002.37	
	Others Growth	SU Growth	MU Growth			
	(applied to 10, 25)	(applied to 40, 50)	(applied to 60)			
	45.21%	44.82%	39.20%			
Note: Others = N	Nodel types Passenger Ve	eh + 4 Tire Comm Ve	h	•		
HPMS Vtype Yea	ar 2040 Calculated from N	lodel Growth Rate a	pplied to Base Year 2	2014:		
CountyID	HPMSVtypeID	yearID	HPMSBaseYearVMT			
47093	10	2040	42,884,117			
47093	25	2040	7,002,465,779			
47093	40	2040	6,233,875			
47093	50	2040	155,799,604			

2040

594,994,388

47093

60

In order to more simply document the projected growth in VMT for each analysis year covered in this conformity determination, the following table (Table B-3) depicts only the total county-level Daily VMT for each analysis year.

Table B-2 – Growth in Total Daily (July Weekday) VMT (by Source Type) for Ozone Analysis

		Analysis Year		
County	Source Type	2022	2030	2040
_	Motorcycle	6,240	7,300	8197.2594
	Passenger Car	349,019	406,579	454,132
	Passenger Truck	297,259	346,239	386,779
	Light Commercial Truck	53,370	65,679	78,246
ANDERSON (Partial)	Intercity Bus	-	=	=
Part	Transit Bus	-	=	=
Z	School Bus	464	542	609
SO	Refuse Truck	486	507	621
DER	Single Unit Short-haul Truck	10,380	12,218	13,685
AN	Single Unit Long-haul Truck	494	567	656
	Motor Home	333	390	434
	Combination Short-haul Truck	1,670	1,960	2,205
	Combination Long-haul Truck	5,747	6,718	7,562
	TOTALS	725,461	848,701	953,126
	Motorcycle	25,155	30,651	36,564
	Passenger Car	1,615,143	1,974,255	2,359,252
	Passenger Truck	1,778,657	2,174,134	2,598,074
	Light Commercial Truck	295,328	346,652	404,975
	Intercity Bus	49	50	50
_	Transit Bus	-	-	-
BLOUNT	School Bus	1,393	1,583	1,836
5	Refuse Truck	1,526	1,737	2,040
Ω	Single Unit Short-haul Truck	62,175	70,372	81,300
	Single Unit Long-haul Truck	2,028	2,326	2,659
	Motor Home	1,554	1,756	2,030
	Combination Short-haul Truck	32,764	36,978	42,569
	Combination Long-haul Truck	108,818	122,656	141,382
	TOTALS	3,924,591	4,763,149	5,672,730
	Motorcycle	99,396	112,464	128,300
	Passenger Car	7,824,185		
	Passenger Truck		8,860,276 7,906,541	10,113,166
		6,981,957 1,423,884	1,597,023	9,024,564 1,811,922
	Light Commercial Truck Intercity Bus	533	589	642
	Transit Bus	8,749	9,691	10,962
×	School Bus	5,624	6,242	7,047
KNOX	Refuse Truck	10,644	11,777	13,317
_	Single Unit Short-haul Truck	339,964	376,879	425,377
	Single Unit Long-haul Truck	12,726	14,095	15,924
	Motor Home	9,188	10,183	11,496
	Combination Short-haul Truck	337,933	367,075	405,217
	Combination Long-haul Truck	1,146,518	1,245,427	1,374,860
	TOTALS	18,201,301	20,518,263	23,342,793

Table B-3 – Growth in Total Annual VMT (by Source Type) for PM2.5 Analysis

		Analysis Year		
County	Source Type	2022	2030	2040
	Motorcycle	7,429,620	8,361,794	9,377,311
	Passenger Car	415,598,714	465,748,512	519,522,752
	Passenger Truck	353,934,760	396,642,551	442,449,881
	Light Commercial Truck	63,547,096	75,213,889	89,501,967
	Intercity Bus	41,486	40,480	39,361
Z	Transit Bus	-	=	-
ANDERSON	School Bus	702,431	772,740	862,463
IDE	Refuse Truck	740,862	799,747	889,132
AN	Single Unit Short-haul Truck	16,743,682	18,312,540	20,301,368
	Single Unit Long-haul Truck	785,684	860,764	957,754
	Motor Home	534,504	583,492	648,068
	Combination Short-haul Truck	16,791,517	17,904,587	19,468,645
	Combination Long-haul Truck	57,754,361	61,567,957	66,995,531
	TOTALS	934,604,718	1,046,809,051	1,171,014,236
	_			
	Motorcycle	8,410,302	10,247,586	12,224,719
	Passenger Car	540,000,060	660,064,124	788,781,971
	Passenger Truck	594,668,688	726,891,052	868,628,701
	Light Commercial Truck	98,738,908	115,898,107	135,397,772
	Intercity Bus	16,308	16,602	16,805
-	Transit Bus	-	-	-
BLOUNT	School Bus	465,625	529,139	613,716
310	Refuse Truck	510,072	580,806	681,987
_	Single Unit Short-haul Truck	20,787,435	23,527,870	27,181,384
	Single Unit Long-haul Truck	677,995	777,813	888,940
	Motor Home	519,698	587,095	678,562
	Combination Short-haul Truck	10,954,310	12,362,999	14,232,228
	Combination Long-haul Truck	36,381,712	41,008,191	47,269,034
	TOTALS	1,312,131,114	1,592,491,386	1,896,595,820
		96	07.53	40.55
	Motorcycle	33,223,334	37,591,303	42,884,542
	Passenger Car	2,615,250,644	2,961,566,096	3,380,347,290
	Passenger Truck	2,333,733,881	2,642,776,542	3,016,479,638
	Light Commercial Truck	475,936,364	533,808,379	605,638,891
	Intercity Bus	178,141	196,787	214,629
V	Transit Bus	2,924,211	3,239,368	3,663,926
KNOX	School Bus	1,879,850	2,086,534	2,355,380
Ā	Refuse Truck	3,557,631	3,936,358	4,451,386
	Single Unit Short-haul Truck	113,633,537	125,972,625	142,183,035
	Single Unit Long-haul Truck	4,253,761	4,711,413	5,322,636
	Motor Home	3,071,140	3,403,624	3,842,541
	Combination Short-haul Truck	112,954,971	122,695,592	135,444,584
	Combination Long-haul Truck	383,226,038	416,286,777	459,549,892
	TOTALS	6,083,823,503	6,858,271,399	7,802,378,372

Table B-3 - Continued

			Analysis Year	
County	Source Type	2022	2030	2040
	Motorcycle	7,072,305	7,963,907	9,142,736
	Passenger Car	399,531,484	450,836,014	517,721,090
	Passenger Truck	438,375,841	494,661,584	568,030,747
	Light Commercial Truck	62,014,119	67,876,426	77,623,278
	Intercity Bus	95,969	93,450	166,925
z	Transit Bus	-	-	-
LOUDON	School Bus	1,035,480	1,163,420	1,246,897
9	Refuse Truck	1,456,680	1,601,049	1,807,837
_	Single Unit Short-haul Truck	19,239,291	21,375,086	24,040,904
	Single Unit Long-haul Truck	1,306,514	1,466,051	1,646,503
	Motor Home	802,536	890,780	1,001,175
	Combination Short-haul Truck	24,386,766	26,755,124	29,674,222
	Combination Long-haul Truck	85,499,749	93,801,324	103,901,332
	TOTALS	1,040,816,735	1,168,484,214	1,336,003,646
	_			
	Motorcycle	388,219	429,086	479,223
	Passenger Car	22,824,473	25,244,207	28,168,205
	Passenger Truck	23,566,069	26,367,092	29,381,866
	Light Commercial Truck	3,625,931	4,059,095	4,624,570
=	Intercity Bus	-	-	-
<u></u>				
Ŧ	Transit Bus	-	-	-
(Parti	Transit Bus School Bus	72,238	79,842	- 89,171
NE (Parti		72,238	- 79,842 -	- 89,171 -
OANE (Parti	School Bus	72,238 - 1,309,988	- 79,842 - 1,447,297	- 89,171 - 1,651,431
ROANE (Partial)	School Bus Refuse Truck	-	-	-
ROANE (Parti	School Bus Refuse Truck Single Unit Short-haul Truck	1,309,988	- 1,447,297	1,651,431
ROANE (Parti	School Bus Refuse Truck Single Unit Short-haul Truck Single Unit Long-haul Truck	- 1,309,988 182,138	- 1,447,297 185,564	- 1,651,431 183,685
ROANE (Parti	School Bus Refuse Truck Single Unit Short-haul Truck Single Unit Long-haul Truck Motor Home	- 1,309,988 182,138 63,531	- 1,447,297 185,564 86,299	1,651,431 183,685 85,256

EPA's MOVES model uses fractions to parse out monthly, daily, and hourly VMT. These fractions are often locally developed to represent local conditions as much as possible. The report developed by the University of Tennessee (UT) for TDOT discusses the development of month and day VMT fractions. These fractions were developed from historical 5-year average HPMS data. These fractions for July were used to adjust annual average weekday VMT to July average weekday VMT for the Ozone analysis.

Hourly VMT fractions by road type were developed from the TPO's travel demand model and a separate post-processing software platform known as "PPSUITE". The post-processer is required in order to disaggregate the TDM traffic volume outputs from three time periods (AM, PM and rest of day) into individual hourly volumes for each of the twenty-four hours in a day. The hourly volumes are developed primarily by pattern matching based on the MOVES defaults for VMT by hour, which vary by road type (urban and rural) but not source type. The PPSUITE software uses the four vehicle types from the TDM (passenger vehicles, four-tire commercial vehicles, single-unit trucks and multi-unit trucks) to generate hourly VMT fractions for the different source types that are associated with those categories. In addition, special hourly distributions were applied to source types 42 and 43 (transit bus and school bus) to reflect the unique operating characteristics of these vehicles; for example, school buses basically only operate during school beginning and dismissal periods.

B.2.5 AVERAGE SPEED DISTRIBUTION

Average speed distribution is the speed of each source type by road type for each hour of the day. MOVES uses 16 speed bins to group source type speed fractions. These fractions represent the amount of time a source type spends traveling at that speed on a particular road type. Note, these fractions represent the time spent in these speed bins; these fractions do not reflect instantaneous speeds, but the average speed, including delays like congestion and traffic signals. Average speed distribution for the Knoxville Nonattainment Area is developed by the TPO's TDM along with the aforementioned PPSUITE post-processer. Similar to the hourly VMT fractions, there is a need for post processing of the raw TDM outputs for average speeds on roadway links primarily for the disaggregate level of detail needed for MOVES inputs. Speed is a direct function of several roadway characteristics and the amount of congestion that is present. The PPSUITE software develops separate 24-hour traffic volumes for each direction of travel on every roadway link in the model network and determines the average speed based on the amount of congestion (link volume-to-capacity ratio) and other characteristics, such as presence of traffic signals. The same speeds were assumed for all vehicle types. The speeds change between over the course of the analysis years in this conformity analysis. The difference accounts for increased congestion and the impact of any changes to the transportation network such as road widening or new roadway construction projects.

B.2.6 ROAD TYPE DISTRIBUTION

Road type distribution is the distribution of VMT on each roadtype by sourcetype. Road type distribution data was provided by TDOT for the base year 2014. Road type distribution was held constant between the base and future year analyses. The off-network road type represents areas where start and idling activity occur. No VMT is assigned to this road type.

B.2.7 RAMP FRACTIONS

Ramp fractions are the fraction of VHT (vehicle hours traveled) spent on urban and rural restricted access ramps. This data is generated by the TPO's TDM.

B.2.8 FUELTYPE AND TECHNOLOGIES

Data for this input was developed and provided by TDEC. A copy of the methodology is provided as follows:

Fuel Type and Technology was formerly called Alternative Vehicle Fuels & Technology (AVFT). This data is now entered in the County Data Manager in MOVES2014a. This input allows users to define the split between different fuel types, including gasoline, diesel and CNG (compressed natural gas) for each vehicle type and model year.

EPA's guidance recommends the use of local data where available. Default information can be used where no local information is available. The default information for transit buses (sourceType 42) includes CNG buses as part of the fleet mix. In most areas of Tennessee there are no transit buses fueled with CNG. Therefore, at a minimum, these buses should be allocated to diesel fuel.

Local information for the Knoxville Area Transit (KAT) fleet was obtained by the Knoxville Regional TPO. This information included bus size, fuel type, model year and number of miles driven in the last year. This data was examined for use in developing local fuelEngFraction fractions. Table B-4 illustrates the data developed into MOVES fuelEngFraction format. The last column, fuelEngFraction, contains the fraction of miles driven for each model year by fuel type (1 = gasoline, 2 = diesel). Note, the KAT fleet does not have any model year 2006 or 2010

buses or vans (sourceType 42 is defined by EPA as passenger vehicles with a capacity of 15 or more persons primarily used for transport within cities).

Table B-4. Local fuelEngFraction From KAT Data.

sourceTypeID	modelYearlD	fuelTypeID	engTechID	fuelEngFraction
42	2002	1	1	0
42	2003	1	1	0
42	2004	1	1	0
42	2005	1	1	0
42	2007	1	1	1
42	2008	1	1	0
42	2009	1	1	0
42	2011	1	1	0.389721741
42	2012	1	1	0.623587602
42	2013	1	1	0
42	2002	2	1	1
42	2003	2	1	1
42	2004	2	1	1
42	2005	2	1	1
42	2007	2	1	0
42	2008	2	1	1
42	2009	2	1	1
42	2011	2	1	0.610278259
42	2012	2	1	0.376412398
42	2013	2	1	1

Some model year vehicles in the KAT fleet are comprised strictly of gas or diesel powered vehicles. Only a couple model years have both gas and diesel vehicles. EPA states in their Technical Guidance2: "In making projections, users should assume no future changes in activity associated with alternate fuel or engine technologies unless those alternate fuels or technologies are required by regulation or law. This necessitates the assumption that all future-year analyses will need to have the same distribution. After examining the distribution of gasoline and diesel transit buses and their VMT in the last year, a more homogenized approach was considered. The VMT were used to develop overall fractions based on fuel type (Table B-5).

Table B-5. Overall KAT Fleet Statistics.

	VMT	Fraction
Gasoline:	712,109	0.25798
Diesel:	2,048,262	0.74202
Total:	2,760,371	1

Using the total fraction of VMT attributable to gasoline vehicles versus diesel vehicles homogenizes the distribution of VMT across all model years while still maintaining the contribution from both diesel vehicles and gasoline vehicles to the overall vehicle miles traveled (approximately 26 percent gasoline and 74 percent diesel) by the transit fleet. This approach is more appropriate for the application of future-year analysis since the specific model year makeup in the future is unknown.

Applying the revised values for the transit bus fleet results in the values contained below in Table B-6. Note fuelTypeID 3 is CNG. These values are set to zero since there are no CNG buses in the KAT fleet. For any future year these same fractions would be applied.

Table B-6. Revised AVFT Values for sourceType 42.

sourceTypeID	modelYearlD	tuel Lype ID	engTechID	
42	2002	1	1	0.25797583
42	2003	1	1	0.25797583
42	2004	1	1	0.25797583
42	2005	1	1	0.25797583
42	2006	1	1	0.25797583
42	2007	1	1	0.25797583
42	2008	1	1	0.25797583
42	2009	1	1	0.25797583
42	2010	1	1	0.25797583
42	2011	1	1	0.25797583
42	2012	1	1	0.25797583
42	2013	1	1	0.25797583
42	2002	2	1	0.74202417
42	2003	2	1	0.74202417
42	2004	2	1	0.74202417
42	2005	2	1	0.74202417
42	2006	2	1	0.74202417
42	2007	2	1	0.74202417
42	2008	2	1	0.74202417
42	2009	2	1	0.74202417
42	2010	2	1	0.74202417
42	2011	2	1	0.74202417
42	2012	2	1	0.74202417
42	2013	2	1	0.74202417
42	2002	3	1	0
42	2003	3	1	0
42	2004	3	1	0
42	2005	3	1	0
42	2006	3	1	0
42	2007	3	1	0
42	2008	3	1	0
42	2009	3	1	0
42	2010	3	1	0
42	2011	3	1	0
42	2012	3	1	0
42	2013	3	1	0

B.2.9 FUEL

The fuel input was also developed and provided by TDEC based on EPA guidance. Essentially the fuels inputs reflect the maximum regulatory RVP levels by month for Tennessee. In addition, since EPA anticipates (based on the 2012 fuel formulations and supply information in MOVES) that essentially all gasoline sold in Tennessee in 2012 and later will contain at least nine percent ethanol, an additional 1.0 PSI waiver applies to the RVP values. Therefore, the RVP values developed are 1.0 PSI above the listed regulatory maximum as allowed by the 1.0 PSI waiver. Additionally, the fuels input provided by TDEC to the TPO includes the appropriate "fuel region" for Knoxville. For the historical baseline year analyses of 2002 and 2008, the MOVES default fuels were used as exported from the County Data Manager for each analysis county.

B.2.10 I/M PROGRAMS

Not applicable to the Knoxville Region

APPENDIX C – INTERAGENCY CONSULTATION

C.1 INTERAGENCY CONSULTATION PARTICIPANTS

Table C-1 shows the current participants in the Knoxville Interagency Consultation process

Table C-1 Knoxville IAC Participants

Agency	Representative(s)
Knoxville Regional Transportation Planning Organization (TPO)	Jeff Welch, TPO Director
400 Main Street, Suite 403	Mike Conger, Transportation Engineer
Knoxville, TN 37902	
(865) 215-2500 FAX: (865) 215-2068	
Knox County Department of Air Quality Management	Lynne Liddington, Director
140 Dameron Avenue	Brian Rivera, Engineer
Knoxville, TN 37917	
(865) 215-5900 FAX: (865) 215-5902	
Tennessee Department of Transportation (TDOT)	Deborah Fleming, MPO Program Manager
505 Deaderick Street	
Nashville, TN 37243	
(615) 741-2848 FAX: (615) 532-8451	
Tennessee Department of Environment and Conservation	Marc Corrigan, Environmental Consultant
(TDEC), Air Pollution Control Division	Greg Riggs, Environmental Consultant 3
Tennessee Tower, 15 th Floor	
312 Rosa L. Parks Ave.	
Nashville, TN 37243	
(615) 532-0616	
Federal Highway Administration, Tennessee Division	Scott Allen, Planning & Air Quality Specialist
404 BNA Drive, Building 200, Suite 508	
Nashville, TN 37217	
(615) 781-5767 FAX: (615) 781-5773	
U.S. Environmental Protection Agency (EPA), Region 4	Kelly Sheckler, Environmental Planner
61 Forsyth Street	Dianna Myers, Environmental Scientist
Atlanta, GA 30303	
(404) 562-9077 FAX: (404) 562-9019	

Agency	Representative(s)
Federal Transit Administration (FTA), Region 4 (Atlanta)	Elizabeth Martin, Community Planner
61 Forsyth Street	
Atlanta, GA 30303	
(404) 562-3500 FAX: (404) 562-3505	
Lakeway Area Metropolitan Transportation Planning Organization (TPO)	Rich DesGrosseillers, MTPO Director
100 W. 1st North Street	
Morristown, TN 37814	
(423)581-0100 FAX: (423) 585-4679	
Great Smoky Mountains National Park (GSMNP),	Jim Renfro, Air Quality Branch Chief
Resource Management & Science Division	Teresa Cantrell, Transportation Planner
1314 Cherokee Orchard Road	
Gatlinburg, TN 37738	
(865)436-1708 FAX: (865) 430-4753	

C.2 INTERAGENCY CONSULTATION MEETING MINUTES

The following meeting minutes were applicable to this transportation conformity determination:

C.2.1 MEETING MINUTES FOR IAC CONFERENCE CALL ON 11/3/16

Knoxville Air Quality Interagency Consultation Conference Call <u>Meeting Minutes for 11/3/16</u>

Call Participants:

Mike Conger, TPO
Elizabeth Watkins, TPO
Kelly Sheckler, EPA Region 4
Dianna Myers, EPA Region 4
Scott Allen, FHWA TN Division
Marc Corrigan, TDEC
Rashad Pinckney, TDOT
Deborah Fleming, TDOT
Brian Rivera, Knox County Air Quality Management

Discussion Items:

1.) Discussion of Draft Planning Assumptions for 2017 KRMP Update

Mike provided an overview of the draft planning assumptions document that was sent to the IAC group for review and comment on October 18th. The following specific items were discussed in greater detail:

- Section III Latest emissions model, Mike asked if EPA was aware of any impending new versions of MOVES that may be released. Dianna Myers replied there wasn't an immediate update pending.
- Section IV Analysis Years, Mike provided an overview of the requirements for analysis years based on the conformity rule pertaining to whether or not an MVEB is available for affected pollutants.

Marc Corrigan pointed out that perhaps a 2030 analysis year would make more sense than a 2034 year in terms of year spacing, Mike replied that he would give that consideration.

There was a discussion regarding what the specific Attainment Year was for the 2012 Annual PM2.5 Standard and whether it would be applicable given the Knoxville Region's current designation status for that standard. Dianna Myers encouraged that Mike follow up with a separate EPA staff person who could provide more information on the specifics of this.

Kelly Sheckler asked Marc Corrigan for an update on the projected timeline for the Knoxville Region PM2.5 Redesignation process that is currently underway with respect to the possible availability of an MVEB for this conformity determination. Marc replied that the draft Redesignation request was currently out for public comment and that a public hearing had been scheduled in Knoxville on November 28th. Following the public hearing it will go to the State Air Board in December assuming no substantive public comments are received and then directly to EPA following the Air Board approval. It was mentioned that the EPA review and approval process had several aspects involved and it could take up to a total of 18 months for final action, which would obviously extend beyond this current conformity analysis.

Kelly Sheckler noted that one other option that could be explored is to pursue a separate "Adequacy" finding for the MVEB portion of the SIP which would allow it to become available for use in conformity much sooner – potentially between 75-90 days from receipt by EPA. She mentioned that TDEC could simply make the Adequacy finding as a separate request in order to initiate the process.

Mike stated that pursuing the adequacy finding process would be preferred from the TPO perspective since otherwise less than baseline tests for the Annual and Daily standards would be required which could be time consuming. Mike asked whether TDEC would support going that route and Marc Corrigan replied that TDEC would be supportive of making a separate petition for an adequacy finding assuming that Knox County AQM was also in support. Brian Rivera replied that he agreed with pursuing the adequacy finding.

Mike noted that one concern would be with the overall timing of the adequacy process in relation to the required conformity due date and whether the TPO would need to run the baseline year analysis as a contingency. Dianna Myers elaborated on the typical timeline for the adequacy process and said that it appeared to be feasible to move forward assuming that budgets would be available within the necessary timeframe. It was noted that it would be important to monitor the various stages of signature chain involved to ensure that the process kept moving forward.

- Section V Emissions Tests, Mike posed a question regarding whether previous emissions amounts developed for the baseline years of 2002 and 2008 using MOVES2010b could be utilized for this conformity determination if a less than baseline year test ended up being required. Kelly Sheckler responded that since a new MOVES model version is required that it would not be possible to use numbers generated by a previous version.
- Section VII MOVES2014a County Data Manager Input Sources and Assumptions, Mike noted that many of the input parameters had been previously established in terms of data sources and assumptions as applied toward Ozone and PM2.5 Redesignation Request emissions analyses and that many county-specific inputs had been developed by the University of Tennessee under contract with TDOT. He stated that the TPO was planning to use those inputs where possible to maintain consistency with the manner in which the MVEB was developed. It was recommended that the TPO staff coordinate further with Egide Louis of EPA Region 4 staff who is responsible for the modeling aspects to confirm certain assumptions. Mike noted that the fuel formulation and fuel type inputs had been developed by TDEC and asked Marc Corrigan if these were still valid. Marc replied that new inputs would be needed for different future years than were used in the SIPs and he could assist with that effort.

In summary, Mike noted that he would like further IAC comments on the planning assumptions by Tuesday, November 8th.

C.2.2 MEETING MINUTES FOR IAC CONFERENCE CALL ON 12/20/16

Knoxville Air Quality Interagency Consultation Conference Call <u>Meeting Minutes for 12/20/16</u>

Call Participants:

Mike Conger, TPO
Elizabeth Watkins, TPO
Richard Wong, EPA Region 4
Egide Louis, EPA Region 4
Marc Corrigan, TDEC
Greg Riggs, TDEC
Rashad Pinckney, TDOT
Deborah Fleming, TDOT
Tom Doherty, TDOT
Rich DesGrosseillers, LAMTPO

Discussion Items:

2.) Discussion of draft Knoxville Metropolitan Transportation Plan (Mobility Plan 2040) Project list

Mike provided an overview of the draft project list for the update of the 2040 Knoxville Regional Mobility Plan. He highlighted the pertinent aspects of the listing including the conformity analysis year, exempt status and regional significance determination. He noted that several projects had been carried over from the previous plan and that new projects were denoted by having a "17" in the project ID number as well as being in bold font. He stated however that even if a project was being carried forward and had its exempt and regional significance been previously determined it could still be open for discussion and possible revision as appropriate.

Marc Corrigan asked about whether today was the appropriate time to discuss the regional significance determination for a specific project. Mike replied that we could discuss individual projects today if there were any questions, or if there were subsequent questions after the call the IAC members could send an email. Marc stated that there was one project in particular that he was looking at and also reviewing a current PM2.5 hotspot determination for a carry-over project, Project ID 13-211 (Foothills Mall Drive Extension). He asked if there was more background for the regional significance determination since it sounded as though this was serving a mall. Mike replied that the project extends the Foothills Mall Dr to the North and is meant to serve primarily local trips since US 129/SR 115 runs parallel to the proposed route which would serve the regional trips. Mike also replied that he could provide additional information for the ones listed as "borderline" cases including a map so that the IAC could better understand the regional significance determination.

Deborah Fleming asked about the determination of "not regionally significant" for Project ID #17-1006 since it seemed to be a significant transit route. Mike replied that since the TPO was proposing that it would be considered exempt from conformity that by the strict regional significance definition in the federal regulations that exempt projects would by default not be regionally significant. There was some discussion regarding whether this project type should in fact be considered "exempt" or not. Mike explained that the current TPO travel model was not sensitive to this type of transit project (transit traffic signal priority) in terms of being able to code the project and determine its effects. Richard Wong stated that he would have to investigate this further and would follow up at a later date regarding exempt/regional significance of this type of project.

Summary of Item 1 Action Items:

- Mike will prepare additional information for the projects denoted as "borderline" regarding their regional significance status to send to IAC.
- 2. IAC members to review the list and respond within 14 days if any questions or comments on the exempt or regional significance status.
- 3. Richard Wong to check on transit signal priority project exempt status.

2.) Regional Emissions Analysis Planning Assumptions and MOVES2014a Inputs

Mike walked the group through the changes to the assumptions based on the November 3rd IAC conference call, which were noted in the red font on the provided documentation. He noted that he had already updated his MOVES2014a version to the "November 2016 Update" so that question had already been addressed. Egide Louis from EPA commented that he had reviewed the MOVES2014a Runspec Parameters and they appeared to be fine. Mike asked for an update regarding the Adequacy process for the Motor Vehicle Emissions Budget (MVEB) of the PM2.5 Redesignation Request. Richard Wong from EPA stated that they were in receipt of the full PM2.5 Redesignation SIP submittal as of that morning and that they had already developed the necessary postings beforehand to initiate the adequacy process as soon as that was received so it should get posted this afternoon starting a 30-day public comment period. He noted that as long as there was no major public comment then it would be ready for the next step of going to the Federal Register when the comment period ends around January 20th.

In conclusion Mike noted that he would be moving forward with the first MOVES runs based on agreement with the initial planning assumptions and would hope to have numbers ready to share with the IAC by mid-January and with a draft conformity determination report around the beginning of February.

C.2.3 MEETING MINUTES FOR IAC CONFERENCE CALL ON 2/15/17

Knoxville Air Quality Interagency Consultation Conference Call <u>Meeting Minutes for 2/15/17</u>

Call Participants:

Mike Conger, TPO
Elizabeth Watkins, TPO
Jeff Welch, TPO
Richard Wong, EPA Region 4
Egide Louis, EPA Region 4
Kelly Sheckler, EPA Region 4
Dianna Myers, EPA Region 4
Scott Davis, EPA Region 4
Lynorae Benjamin, EPA Region 4
Marc Corrigan, TDEC
Rashad Pinckney, TDOT
Deborah Fleming, TDOT
Tom Doherty, TDOT
Brian Rivera, Knox County Air Quality Management
Jim Renfro, GSMNP

Discussion Items:

3.) Discussion of Status of PM2.5 MVEB Adequacy Review Process

Mike asked if there was an update from EPA regarding the ability for the PM2.5 MVEB Adequacy finding to move forward pending the indefinite hold on federal rulemaking activities that is currently in place. Lynorae Benjamin from EPA Region 4 stated that the EPA staff was actively working towards getting the adequacy finding made and making headquarters staff aware of the implications of delays on the conformity process being conducted by the Knoxville TPO. She asked Mike for specific examples of projects that may be affected if a conformity lapse were to occur so that they could use those to help make their case in expediting this matter. Mike replied that he would check into the specific affected projects and would provide a list to the EPA staff. There was additional discussion regarding the different options and timeline for needing to make a decision about moving forward. It was noted that one option could be to have the TPO Board adopt the Plan subject to the MVEB subsequently being found adequate however this was not preferred in terms of how the public comment process would work in that scenario. Another option discussed was to proceed under both scenarios – with budgets and with the interim tests using a baseline year analysis and provide documentation of each in the conformity determination report that goes out for public comment. Examples of this process were given for Chattanooga and Charlotte, NC areas and those could be provided to the TPO staff. Mike stated that the TPO staff will weigh the options and will advise the IAC group of the determined course of action in the near future. He noted that additional IAC input and agreement on the development of the MOVES inputs for the baseline years would be needed.

2.) Overview of Draft Conformity Determination Report

Mike provided a brief summary of the draft conformity determination report noting that it was based on the PM2.5 MVEBs being available. He stated that the emissions tests indicated that the budgets were met for all analysis years that were included thereby demonstrating conformity of the Long Range Transportation Plan update. He noted that the detailed MOVES model inputs had been provided through a "Dropbox" link. He stated that the deadline for the 30-day IAC review period was Friday, March 3rd but would take any comments or questions at this time. Marc Corrigan asked a question regarding the travel demand model that was used to support the analysis and if there were any changes from what was used for the last major Plan update. Mike replied that the travel model assumptions and inputs had been discussed on a previous IAC call and that the TPO was basically carrying forward the same model but it had been updated from a 2010 base year to a 2014 base year which had been validated to actual traffic counts. Egide Louis stated that he did not have any initial comments regarding his review of the MOVES input documentation but that he had not yet had a chance to perform any of the model runs yet, which he expected to do in the coming week. Kelly Sheckler stated that she had reviewed some of the text and did not have any comments as yet.

Regional Emissions Analysis Planning Assumptions and MOVES2014a Inputs for Development of 2017 KRMP CDR

for IAC Review December 20, 2016

I. Background:

Note: This is a supplement to the original Planning Assumptions document prepared for IAC Review on October 18, 2016. Revisions and latest input assumptions are noted in red font.

The intent of this document is to establish the planning assumptions for the conformity analysis that will be undertaken as part of the 2017 update to the Long Range Transportation Plan for the Knoxville Regional TPO. The Knoxville TPO compiles a single overall Long Range Plan – known as the Knoxville Regional Mobility Plan (KRMP) for the entirety of the air quality non-attainment / maintenance areas in order to ensure all planned projects meet air quality conformity requirements. The ultimate horizon year for the KRMP is the year 2040.

The Knoxville Region is currently subject to transportation conformity for 3 separate NAAQS –

- 2008 8-hour Ozone Standard (Maintenance Area) Blount, Knox and part of Anderson counties
- 1997 Annual PM2.5 Standard (Nonattainment Area) Anderson, Blount, Knox, Loudon and part of Roane counties
- 2006 Daily PM2.5 Standard (Nonattainment Area) same area as Annual PM2.5 Standard

Attachment 1 is a map of both the Ozone Maintenance Area and the PM2.5 Nonattainment areas along with the TPO Planning Area. An air quality conformity determination for the above pollutants is required by June 1, 2017 as part of the required 4-year update to the Long Range Transportation Plans for the Knoxville Regional TPO.

II. Planning Assumptions for developing Travel Demand Forecasts:

Following is a brief summary of the current travel demand forecasting model process including the associated socioeconomic data development. Additional technical information is being provided to the IAC group in separate documents.

A full model update was finalized in 2012, which was validated to a 2010 base year. A minor update was conducted for the 2017 KRMP development in which only the input variable and external traffic data sources were modified, but the underlying travel behavior relationships were unchanged. The model has been re-validated to a base year of 2014 to coincide with the latest available traffic and land use data at

the time of the model update development and all standard FHWA validation targets have been achieved.

The model outputs for total vehicle miles of travel (VMT) by roadway functional classification have been compared against the estimated actual amount of VMT as reported to FHWA for the Highway Performance Monitoring System (HPMS) and appropriate HPMS adjustment factors have been developed to ensure accurate replication of the amount of travel in the region. The travel demand model encompasses a total of 10 counties in the Knoxville Region and includes the entirety of the previously noted maintenance/nonattainment areas as shown on Attachment 1.

The county-level data for base year 2014 population and household characteristics is primarily derived from the U.S. Census Bureau's inter-censal Population Estimates data and American Community Survey (ACS) whereas employment data was obtained through various sources such as the Bureau of Economic Analysis (BEA) and Bureau of Labor Statistics (BLS). The future year 2040 county-level population and employment control totals were developed through a review of available sources of projection data including proprietary data from Woods & Poole Economics, the University of Tennessee Center for Business & Economic Research and previous custom projections developed by a consultant for the TPO. It was determined that the most appropriate source of future year projections remained the previously developed custom set and this recommendation was endorsed for use in preparation of the 2017 KRMP Update by the TPO Executive Board at its August 26, 2015 meeting.

The travel demand model summarizes socioeconomic characteristics (population, employment, household income, etc) into sub-county geographic units of somewhat homogenous land use known as Traffic Analysis Zones (TAZ). The county-level estimates for the base and future analysis years must be allocated to the TAZs. In the case of the base year, population data from the 2010 decennial census is available at very small geographic units known as Census Blocks which are aggregated to the TAZ-level. The net change in population for each county between 2010 and 2014 was then allocated based on recent trends in residential building permit activity. Employment data was allocated based on a proprietary data set known as InfoGroup obtained through TDOT, which provides detailed establishment level information of employment counts by industry type geocoded to its actual location.

The allocation of future year county-level control totals for population and employment represents a significant challenge in terms of attempting to predict the exact locations of growth, which is subject to many various market factors and unforeseen events such as a major auto manufacturer deciding to locate in a previously undeveloped area. A land use allocation modeling tool was developed for the TPO as part of a previous planning effort funded under the HUD Sustainable Communities Initiative grant known as "Plan East Tennessee" (PlanET). Since economic conditions have not changed significantly since this tool's development and the KRMP is maintaining the same future out year of 2040 it was decided to rely again on the allocation results from the trend scenario that was developed for PlanET. The trend scenario was developed to serve as a base "business-as-usual" case to compare against other types of future land use scenarios that were considered such as a transit oriented development scenario of more clustered and mixed use growth than that which as occurred over the recent past which is primarily auto-oriented. The allocation results were updated to reflect the most recent "approved development" information, which are major new residential and commercial projects that have been previously announced and are likely to develop over the short term.

III. Latest Emissions Model:

The latest on-road emissions model from EPA as of this document's writing is known as MOVES2014a. This is the model that will be utilized to determine the total on-road emissions of the pollutants of concern related to Ozone and PM2.5 for each required analysis year.

Question for IAC – should the "November 2016 Update" version of MOVES2014a be used?

IV. Analysis Years:

Analysis year requirements are described in 40 CFR 93.118 (Motor Vehicle Emissions Budget) and 40 CFR 93.119 (Interim Emissions Tests) and summarized in the table below:

Approved Budget	No Budget Approved
Attainment Year	Year within first 5 years
Horizon years no > 10 years apart	Horizon years no > 10 years apart
Last Year of Transportation Plan	Last Year of Transportation Plan

Ozone:

A motor vehicle emission budget (MVEB) was established in the Redesignation Request and Maintenance Plan submitted for the 2008 8-Hour Ozone NAAQS and determined to be adequate for the purposes of transportation conformity on July 13, 2015. Separate MVEBs were developed for years 2011 and 2026, which are to be used for analysis years prior to 2026 and from 2026 onward respectively. The required analysis years for the Ozone analysis therefore will fall under the "Approved Budget" scenario in the above table.

PM2.5:

As of the date of preparation of this document, the Tennessee Department of Environment & Conservation (TDEC) has developed draft Redesignation Requests for both the 1997 Annual PM2.5 and 2006 Daily PM2.5 Knoxville nonattainment areas. The draft Redesignation Request proposes an MVEB for both the base year 2014 and future year 2028. The timing of an approved Maintenance Plan and MVEBs for PM2.5 is currently uncertain and several steps in the approval process remain including approval by the Tennessee State Air Board and the various required public comment and EPA review periods.

There are two possible scenarios for required analysis years that must be accounted for based on whether and MVEB is available or not.

Scenario 1 - Analysis Years Based on Approved Budgets for both Ozone and PM2.5:

This scenario assumes that the Knoxville Region will be designated Attainment for the revised 2012 PM2.5 NAAQS and therefore the Attainment Year (2017?) would not be a required analysis year. In addition, the Attainment Year for the 2008 8-Hour Ozone Standard has already passed thus it would not be a required analysis year.

- 2026 (Ozone MVEB)
- 2028 (PM2.5 MVEB)
- 2034 (Year < 10 years apart)

• 2040 (Final LRTP Year)

Scenario 2 – Analysis Years Based on Approved Budget for Ozone only:

- 2022 (Year within first 5 years of Plan, i.e. 2017 2022)
- 2026 (Ozone MVEB)
- 2034 (Year < 10 years apart)
- 2040 (Final LRTP Year)

The required analysis years for both scenarios are fairly similar with both sharing years of 2026, 2034 and 2040 between them. Since there is uncertainty of the timing of the MVEB approval process at this time, the TPO proposes to move forward under the assumption of Scenario 2, which provides for the analysis of year 2022 and if Scenario 1 is ultimately required then the analysis year 2028 can be developed through interpolation between 2026 and 2034.

Based on the IAC discussion held on 11/3/2016 it was assumed that the TPO could move forward with the assumption that an MVEB Adequacy determination could be made for the pending PM2.5 Maintenance Plan in time for this conformity deadline, therefore the preferred Analysis Years were determined to be:

- 2022 initial network year model run
- 2026 no model runs, interpolated between 2022 and 2030
- 2028 no model runs, interpolated between 2022 and 2030
- 2030 year < 10 years apart
- 2040 final Plan horizon year

V. Emissions Tests:

The required emissions tests are also currently subject to variability based on whether MVEBs are approved for both PM2.5 annual and daily standards as discussed previously. An emissions test against the MVEB would be used if available, and if not available then a "less than baseline year" test would be used. Following are the required emissions tests for each pollutant for various possible scenarios:

1997 Annual PM2.5 Standard:

There is no currently available MVEB for this standard, a previous MVEB that was established for a 2009 Attainment Demonstration has since been retracted by EPA. If an MVEB is determined to be adequate prior to the conformity process ending then it would be used, if not then a "Less than Baseline Year 2002 Emissions Test" would be used.

The baseline year 2002 emissions were developed for Direct PM2.5 and Oxides of Nitrogen (NOx) as part of a conformity determination conducted in early 2015 using MOVES2010b. An important discussion point for the IAC group will be whether the same emissions level as previously calculated can be used, or if instead a new baseline value must be determined using MOVES2014a.

Note: There is another possible course of action involving the timing of the approval of the Redesignation Request since the 1997 Annual PM2.5 Standard has been formally replaced by a more stringent Annual PM2.5 Standard established in 2012. The EPA has stated that the 1997 standard will be

revoked for those areas in attainment of the 2012 standard and therefore conformity would no longer apply to the Knoxville Region.

Based on IAC discussion from 11/3/16, TPO will proceed with budget test assuming MVEB Adequacy process is used. Below is the proposed MVEB for the 1997 Annual PM2.5 Standard:

Area-wide	MVFR	with	Safety	/ Margins	for the	Knoxville Area
Al ca-wide	IVIVED	WILLI	Jaicty	/ IVIAL SIIIS	ioi tiic	KIIOXVIIIC AI Ca

028		
tons/year		
245.00*		
7,171.14		

^{*}The MVEB for PM_{2.5} in 2028 includes the available safety margin of 10.39 tons/year and an additional 69.33 tons/year.

2006 Daily PM2.5 Standard:

The same discussion as for the above Annual Standard essentially applies to the Daily Standard with the exception of the required baseline year being 2008 instead of 2002. Once again, an important discussion point will be whether the previously computed 2008 baseline emissions using MOVES2010b can be utilized for this analysis. Also, unlike the annual standard, there is no provision for revoking the daily standard as it was not modified in 2012.

Based on IAC discussion from 11/3/16, TPO will proceed with budget test assuming MVEB Adequacy process is used. Below is the proposed MVEB for the 2006 Daily PM2.5 Standard:

Area-wide MVEB with Safety Margin for the Knoxville Area

	2014	14 2028		
Pollutant	tons/day			
PM _{2.5}	1.22	0.67*		
NO _x	42.73	19.65		

^{*}The MVEB for PM_{2.5} in 2028 includes the available safety margin of 0.03 tons/day and an additional 0.19 tons/day.

2008 8-Hour Ozone Standard:

As noted previously, an MVEB for years 2011 and 2026 was recently established for the 2008 8-hour Ozone Standard effective on July 13, 2015. Following are the 2011 and 2026 MVEB for both VOC and NOx that the TPO must demonstrate conformity against:

Motor Vehicle Emissions Budgets for NOx and VOC for 2011 and 2026

	2011	2026	
	tons/day		
VOC	19.71	10.49	
NO _x	41.62	17.69	

Analysis years prior to and including 2025 must compare expected on-road emissions against the 2011 MVEB while analysis years of 2026 and beyond must use the 2026 MVEB.

VI. MOVES2014a Runspec Parameters

The MOVES model run is first set up based on a number of parameters to define the appropriate geographic scale and other aspects of the modeling domain to be utilized in the analysis, which is referred to as a "run specification" or runspec for short. Following is a list of the MOVES runspec panels and how they are proposed to be set up for the KRMP conformity analysis and based on appropriate technical guidance documentation from EPA:

1.) <u>Scale:</u>

• Both Pollutants – County level scale – Inventory mode

2.) Time Spans:

- Both Pollutants Year (based on analysis years as ultimately selected, most likely 2022, 2030 and 2040), by Hour, all hours
- Ozone July weekday
- PM2.5 All months, all days

3.) Geographic Bounds:

- Ozone Anderson (partial), Blount and Knox counties
- PM2.5 Anderson, Blount, Knox, Loudon and Roane (partial) counties

4.) Vehicles/Equipment:

 Both Pollutants – Gasoline, CNG, ethanol (E85) and diesel fuels, all valid vehicle combinations

5.) Road Type:

• Both Pollutants – All road types

6.) Pollutants and Processes:

- Ozone NOx and VOC and all other required supporting prerequisite pollutants
- PM2.5 Primary PM2.5 (exhaust, brake and tire wear), NOx and all supporting prerequisite pollutants
- Note unchecked the "Refueling Displacement Vapor Loss" and "Refueling Spillage Loss" to exclude refueling emissions that are instead included in the Area source emissions inventory.

7.) Output options:

- Both Pollutants
 - General Output tab: Units = grams, joules, miles; Activity: checked "Distance Traveled" and "Population"
 - Output Emissions Detail tab: checked "Road Type" and "Source Use Type"

VII. MOVES2014a County Data Manager Input Data Sources and Assumptions

The "County Data Manager" portion of MOVES allows the user to input specific data for several required inputs that effect and are used to compute emissions. Locality-specific data is required for some inputs and is always desired if available rather than using national defaults. For purposes of the pre-analysis

consensus plan this document will only cover the general proposed sources for each input and further review of specific inputs will occur as part of the forthcoming analysis.

CDM 1.) Meteorology – this input consists of locality specific values of temperature and humidity covering the required analysis time frame, i.e. summer months for Ozone and all months for annual PM2.5. It is generally required that the conformity analysis must use consistent inputs for meteorology that were developed for an applicable SIP and its MVEBs. The meteorology inputs for the Ozone Redesignation Request were developed by TDEC and are based on data gathered at the Knoxville Airport and averaged over the period from 2009 to 2011. As stated previously, the PM2.5 SIP is still under development however the draft version is based on a 3-year average from 2012 to 2014. The appropriate input for the PM2.5 analysis will be determined through the IAC process. As per IAC discussion – will use the meteorology inputs directly from the PM2.5 Maintenance Plan for PM2.5 conformity analysis.

CDM2.) Source Type Population – this input defines the vehicle population within the study area by type of vehicle and must be generated using local-specific data. This input has been generated for a base year of 2014 by researchers from the Department of Civil and Environmental Engineering at the University of Tennessee, Knoxville under contract to the Tennessee Department of Transportation using a combination of county-level motor vehicle registration data from the Tennessee Department of Revenue, surveys of local school districts and transit agencies on bus ownership and national default ratios to determine vehicle counts of those vehicles not included in the motor vehicle registration database such as long-haul trucks. In order to forecast future-year projections of Source Type Population for the light duty vehicle source types the Knoxville TPO's travel demand model was utilized to develop growth factors from its vehicle ownership model. All other source type growth factors were based on the projected employment growth percentage. Special attention has to be applied to the partial counties of Anderson (for Ozone) and Roane (for PM2.5) to ensure that only the vehicles garaged in those specific areas are included.

CDM3.) <u>Age Distribution</u> – vehicle age distribution datasets were also recently developed for year 2014 by the University of Tennessee in MOVES format that are utilized for all analysis years of 2014 and beyond. The appropriate inputs for the historical baseline years of 2002 and 2008 were determined through the IAC process to be the previous vehicle age distribution data developed for MOBILE6.2 year 1999/2000 and using the "RegistrationDistributionConverter_Veh16.xls" converter from EPA to develop the MOVES format required.

CDM4.) <u>Vehicle Type VMT</u> – this MOVES input actually consists of four separate input files related to the estimated vehicle miles of travel in the area being analyzed including:

- HPMSVTypeYear this is the total amount of VMT estimated for each of the analysis years by Source Type. A base year value was developed by UT for 2014 and growth factors by major source type provided by the KRTM are used to develop the future year estimates.
- Month this input accounts for the variability in travel throughout the months of the year.
 These inputs were developed by UT from traffic count data collected by TDOT.

- Day this input accounts for the differences in weekday travel versus weekend travel and are also available from the UT study.
- Hour this input accounts for the hourly variation in travel and is provided by the KRTM using
 a post processing software tool known as PPSUITE.

CDM5.) <u>Average Speed Distribution</u> – this input will be developed for all future years using the KRTM and the PPSUITE post processing tool, which formats the travel model outputs on network speeds into the appropriate MOVES format. Again, a different approach will be required for the baseline years 2002 and 2008 since a KRTM network year is not available for those. The TPO staff utilized the EPA "Average Speed Converter MOBILE6.xls" file to process the previous MOBILE6 inputs of "SpeedVMT" into the proper MOVES format for this analysis.

CDM6.) <u>Road Type Distribution</u> – this input provides the distribution of VMT on each road type by source type. This input was developed by UT for 2014 and will be held constant for the future year analyses. The baseline year 2002 and 2008 inputs were provided by the same MOBILE6 VMT converters used for the Vehicle Type VMT inputs described in CDM4 above.

CDM7.) <u>Ramp Fractions</u> – this input is derived from the TPO's travel demand model and post processing tool PPSUITE to determine the percent VHT spent on urban and rural restricted access ramps.

CDM8.) <u>Fuel Type and Technology</u> – this input is provided by TDEC based on EPA guidance to reflect fuels used in the Knoxville Region. Transit fleet data from Knoxville Area Transit (KAT) was used to develop fuel type profiles for transit buses (sourceType 42), which consist only of gasoline and diesel fuel vehicles (no CNG).

CDM9.) <u>Fuel Formulation and Supply</u> – this input has also been previously developed by TDEC as established in SIP preparation efforts for both Ozone and the draft PM2.5 Redesignation request. It is proposed to utilize the inputs from the draft PM2.5 documentation as being the most recent available.

CDM10.) <u>Starts</u> – local information for this input is not currently available and therefore MOVES defaults are utilized.

CDM11.) <u>I/M Programs</u> – this is not applicable to the Knoxville Region as it does not currently have any inspection and maintenance programs.

C.4 RESPONSES TO COMMENTS FROM IAC PARTICIPANTS

Comments received 2/22/17 from Marc Corrigan, TDEC:

Page 2: Replace the reference to TDOT with TDEC. Response – Correction made.

Page 17: For the PM2.5 analysis years, shouldn't the "2026" actually be 2028? Response – Yes, it should be 2028, correction made.

Page 25: Last sentence, should the last "and" be backed up a couple words? Response – Yes, correction made.

Page 40: We've moved. See new address and info in the signature, below. Can you also add Greg Riggs to the email distribution for the IAC (copied)? Response – correction and addition made.



Elizabeth Watkins <elizabeth.watkins@knoxmpc.org>

Knoxville Draft Conformity Determination Review Reminder and Update

Mike Conger <mike.conger@knoxtrans.org>
To: Elizabeth Watkins <elizabeth.watkins@knoxtrans.org>

Fri, May 12, 2017 at 1:23 PM

----- Forwarded message -----

From: Louis, Egide <Louis.Egide@epa.gov>

Date: Fri, Mar 10, 2017 at 1:11 PM

Subject: RE: Knoxville Draft Conformity Determination Review Reminder and Update

To: Mike Conger <mike.conger@knoxtrans.org>

Cc: "Myers, Dianna" < Myers. Dianna@epa.gov >, "Monteith, Richard" < Monteith.Richard@epa.gov >

Hi Mike:

I reviewed the MOVES files for ozone and PM conformity analysis you provided for 3 counties (more in detail Anderson County) and they all look good.

Selections made in RunSpecs are appropriate (e.g., "County" for Scale, "Hour" for Time Spans, all processes selected for each pollutant, ...) and all the tables in the Input Database (auditlog, sourcetypeagedistribution, avgspeeddistribution,.....) are present and were imported properly in the CDM. The model run properly without errors.

A review of the tables in the Output Database shows that all necessary files are present and the modeling was completed without error. Finally, MySQL scripts and methodologies used to process the output were provided.

Thanks,

Egide N. Louis, PhD

Mobile Emissions Modeler/Exposure and Human Health Risk Assessor

Air Data and Analysis Section

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From: Mike Conger [mailto:mike.conger@knoxtrans.org]

Sent: Wednesday, March 01, 2017 12:23 PM To: Louis, Egide <Louis. Egide@epa.gov>

Subject: RE: Knoxville Draft Conformity Determination Review Reminder and Update

Egide,

That should be okay, but the earlier the better because I am planning to be out of the office the following week and will difficulty addressing anything very significant. Thanks,

Mike

On Mar 1, 2017 9:49 AM, "Louis, Egide" <Louis.Egide@epa.gov> wrote:

Hi Mike:

Can I get back to you with my comments on the MOVES files sometimes next week? I won't have a chance to review them by Friday.

Thanks,

Egide N. Louis, PhD

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From: Mike Conger [mailto:mike.conger@knoxtrans.org]

Sent: Tuesday, February 28, 2017 10:47 AM

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Subject: Knoxville Draft Conformity Determination Review Reminder and Update

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APPENDIX D – MOBILITY PLAN 2040 PROJECT LIST WITH EXEMPT AND REGIONAL SIGNIFICANCE STATUS DETERMINATION

D.1 BACKGROUND

The purpose of this list is to specifically document the current projected horizon year for each project and to identify each project's air quality conformity exempt/non-exempt status as well as whether it has been determined to be regionally significant. It should be noted that the Mobility Plan 2040 identifies separate interim horizon years of 2019, 2026 and 2034 that were used to better define a project's priority within the required 10 year intervals for conformity purposes, however these are still consistent with the conformity project list.

D.2 LIST OF PROJECTS COMPLETED OR UNDER CONSTRUCTION SINCE THE PREVIOUS LRTP

The following projects were listed in the previous LRTP conformity determination and have since been completed or have started construction that are accounted for in the regional travel model, but not carried forward in the full project list:

Table D-1 Completed Projects

KRMP#	Jurisdiction	Project Name	Termini	Project Description
09-409	Lenoir City (TDOT)	US Hwy 321 (SR-73)	US Hwy 11 (SR-2) to east of Little TN River	Construct 4-lane road on existing and new alignment
09-603	Knox County (TDOT)	,,		New 4-lane road w/center turn lane
09-604	Knox County (TDOT)	Maynardville Hwy (SR-33)	Temple Acres Dr to Union County Line	Widen 2-lane to 4- lane w/center turn lane
09-610	City of Knoxville (TDOT)	Western Ave (SR-62)	Texas Ave to Major Ave	Widen 2-lane to 4- lane w/center turn lane
09-611	City of Knoxville (TDOT)	I-640/Broadway Interchange	Interchange and connecting roadways	Interchange improvements
09-612	City of Knoxville (TDOT)	Western Ave (SR-62)	Schaad Rd to I-640	Widen 2-lane to 4- lane w/center turn lane
09-613b	City of Knoxville	Cumberland Ave	22nd St to 17th St	Road Diet - Convert 4-lane to 3-lane

09-602	City of Knoxville (TDOT)	Alcoa Hwy (SR-115)	Maloney Rd to Woodson Dr	Widen 4-lane to 6- lane
09-324			Mabry Hood Rd to	Widen 2-lane to 4- lane w/center turn
	Knox County	Parkside Dr	Hayfield Rd	lane

D.3 LIST OF ALL MOBILITY PLAN PROJECTS BY COUNTY AND HORIZON YEAR

The following project list (Table D-2) represent the updated Mobility Plan 2040 based on the project selection process and are being covered by this regional emissions analysis and conformity determination. The last two columns in this table are important for transportation conformity as they indicate (1) whether a project has been determined to be Exempt or Non-Exempt with respect to the requirement to demonstrate conformity, i.e. generally any project affecting roadway capacity will be considered "Non-exempt" and (2) whether a project is Regionally Significant or not. The regional significance of a project can affect whether a regional emissions analysis may be required for the project or a project change as non-regionally significant projects may be able to rely on a previous regional emissions analysis to determine conformity.

The project list is sorted by county and conformity analysis year as follows:

Counties:

- Anderson
- Blount
- Knox
- Loudon
- Sevier

Conformity Analysis Years:

- 2022
- 2030
- 2040

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

10	ble b-2. Wobility Hall 2	040 Project List – Exempt	and Regional Signin	carice Sta	itus				
KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	Length (miles)	Project Description/Type of Improvement	Conformity Analysis Year	Exempt Status	Regional Significance
	n County Projects					, , ,			
13-1005	Oak Ridge Turnpike Pedestrian Safety Improvements	Oak Ridge Turnpike at South Tulane intersection and Oak Ridge Turnpike at East Division/Tennyson intersection	Oak Ridge	Oak Ridge	0.06	Pedestrian safety improvements, including marked crosswalks, ramps and pedestrian indications, at two intersections. Includes mast arm replacement, to be funded by L-STP funds.	2022	Exempt	N/A
17-1001	Solway Park and Ride	N/A	Oak Ridge	Oak Ridge	0	Improve and expand existing parking area located at the TVA boat launch along Edgemoor Rd (SR-170) to accommodate park and ride opportunities	2022	Exempt	N/A
17-101	Emory Valley Road at Lafayette Drive Intersection	Emory Valley Road at Lafayette Drive Intersection	Oak Ridge	Oak Ridge	0	Remove dedicated right turn lane from Emory Valley (west) to Lafayette Drive (north) with standard right turn lane.	2022	Exempt	N/A
13-802	Oak Ridge Traffic Control & Communication System Upgrades	Citywide	Oak Ridge	Oak Ridge		Replace traffic control and communication system, adding pedestrian safety and bicycle friendly elements, including emergency vehicle accommodation.	2022	Exempt	N/A
13-830	Oak Ridge Rails to Trails	Melton Lake Rd/Greenway to Scarboro Rd	Oak Ridge	Oak Ridge	4.5	Construct new shared use "rails-to-trails" path along an abandoned rail line through the City of Oak Ridge.	2030	Exempt	N/A
13-101	Emory Valley Road at Melton Lake Drive Roundabout	Intersection of Emory Valley Road at Melton Lake Dr	Oak Ridge	Oak Ridge	0	Construct roundabout	2030	Exempt	N/A
13-102	Tulane Avenue at Pennsylvania Avenue Roundabout Construction	Intersection of Tulane Ave at Pennsylvania Ave	Oak Ridge	Oak Ridge	0	Construct roundabout	2030	Exempt	N/A
09-101a	Edgemoor Road (SR-170) - Phase 1	Oak Ridge Hwy (SR-62) to Melton Lake Dr	Oak Ridge	трот	2.6	Widen from 2 to 4 lanes with addition of bicycle/pedestrian facilities	2030	Non- Exempt	Regionally Significant
09-101b	Edgemoor Road (SR-170) - Phase 2	Melton Lake Dr to Clinton Hwy (US- 25W/SR-9)	Oak Ridge	TDOT	3.6	Widen from 2 to 4 lanes with addition of bicycle/pedestrian facilities	2030	Non- Exempt	Regionally Significant
Blount C	County Projects			,					
13-1002	Pistol Creek Greenway - Phase IV	Pistol Creek Phase II Greenway at Wright Rd (Meadowood Apartments) to Clayton Greenway Trail segment and adjoining sidewalk system near Clayton Dr (South)	Alcea	Alcoa	2.2	Construction of 10 foot wide greenway trail and amenities consisting of approximately 11,716 linear feet of asphaltic trail and 200 feet of wood boardwalk generally paralleling Pistol Creek.	2022	Exempt	N/A
13-833	Maryville to Townsend Greenway - Phase 1 (Brown Creek)	Aluminum Ave to US 321	Maryville	Maryville	1.2	Construct a new shared use path between the existing Maryville/Alcoa Greenway at Aluminum Avenue to Lamar Alexander Pkwy along Brown Creek	2022	Exempt	N/A
13-210	North Park Blvd & Airbase Rd Safety Improvements	Intersection of North Park Blvd & Airbase Rd	Alcoa	Alcoa	0.3	Realign North Park Boulevard to Airbase Road	2022	Exempt	N/A
09-214	Sevierville Rd (SR-35/US-411) Widening	Washington St (SR-35) to Walnut St	Maryville	TDOT	0.4	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	2022	Non- Exempt	Regionally Significant

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

					Length		Conformity	Exempt	
KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	(miles)	Project Description/Type of Improvement	Analysis Year	Status	Regional Significance
09-224	Foothills Parkway	From U.S. 321 (SR-73) in Walland (Blount County) to U.S. 321 (SR-73) in Wears Valley (Sevier County)	Blount County/Sevier County	NPS	16	Construct a new 2-lane roadway	2022	Non- Exempt	Regionally Significant
09-248a	Topside Road (SR-333) Improvements - Phase 1	Wrights Ferry Rd to TVA Lab Rd	Alcoa	TDOT	1	Add continuous center turn lane	2022	Non- Exempt	Not Regionally Significant
13-214	Old Lowes Ferry Rd at Louisville Rd (SR333) Intersection Improvements	Intersection of Old Lowes Ferry Rd at Louisville Rd (SR-333)	Blount County	TDOT	0	Realign intersection and add turn lanes	2022	Exempt	N/A
17-201	Amerine Road Improvements	Fielding Drive to Sevierville Rd	Maryville	Maryville	0.5	Reconstruct 2-lane road with addition of turn lanes and sidewalk	2022	Exempt	N/A
13-206	Tesla Boulevard	Intersection of Future LIC road & Associates Blvd to Intersection of Springbrook Rd and E. Edison St	Alcoa	Alcoa	0.8	Construct new 2-lane and 3-lane boulevard with bicycle/pedestrian facilities	2022	Non- Exempt	Regionally Significant
13-808	Maryville Alcoa Advanced Traffic Management System Phase II	Various intersections along US 411, US 321, US 129 and SR 33	Maryville	Maryville	N/A	Upgrade signal communications and equipment along US411/US321, US129 and SR33.	2022	Exempt	N/A
09-238	Robert C. Jackson Drive Extension	Lamar Alexander Pkwy (US -321/SR-73) to Morganton Rd	Maryville	Maryville	1.2	Construct new 2-lane roadway with sidewalks	2022	Non- Exempt	Regionally Significant
17-202	US 129 Widening	Hall Rd (SR-35) to US 321	Maryville	TDOT	2.6	Widen from 4 to 6 lanes within existing right-of-way	2022	Non- Exempt	Regionally Significant
13-211	Foothills Mall Drive Extension Phase 1	US-129 Bypass (SR-115) to Foch St.	Maryville	Maryville	0.5	Construct new 2-lane road with center turn lane and sidewalks	2022	Non- Exempt	Not Regionally Significant
17-203	US 129/W. Broadway Avenue (SR- 33/US411) Intersection Improvements	Foothills Mall Dr to Mall Rd	Maryville	TDOT	0.3	Intersection improvements at Foothills Mall Dr/Montgomery Ln and addition of turn/auxiliary lanes	2022	Exempt	N/A
17-204	US 129 Bypass/SR 115 Intersection Improvements	Mall Rd to Lamar Alexander Pkwy (US- 321/SR-73)	Maryville	TDOT	0.7	Intersection improvements at W. Lamar Alexander Pkwy (US-321/SR-73) and addition of turn/auxiliary lanes	2022	Exempt	N/A
09-237	E Broadway (SR-33) at Brown School Rd	Intersection of E Broadway (SR-33) at Brown School Rd	Maryville	TDOT	0	Realign intersection, add turn lanes and new traffic signal	2022	Exempt	N/A
09-218	Alcoa Hwy (SR-115/US-129)	Hall Rd (SR-35) to proposed interchange at Tyson Blvd.	Alcoa	TDOT	1.3	Widen from 4-lane divided to a 6-lane divided highway. Extend Tyson Boulevard under SR-115 and reconstruct Hunt Rd overpass.	2022	Non- Exempt	Regionally Significant
09-262	Montvale Rd (SR-336) Widening	Montvale Station Rd to Lamar Alexander Pkwy (US-321/SR-73)	Maryville	TDOT	0.6	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	2030	Non- Exempt	Not Regionally Significant
09-242	W Broadway Ave (SR-33/US-411) Improvements	S Cedar St to Lamar Alexander Pkwy (US-321/SR-73)	Maryville	Maryville	0.5	Construct additional westbound left turn lane at intersection with Lamar Alexander Pkwy and convert continuous center turn lane to additional westbound through lane along W Broadway Avenue. Project includes construction of new shared use path and other bicycle/pedestrian enhancements	2030	Non- Exempt	Regionally Significant
09-211	Morganton Road Reconstruction - Phase 1	Foothills Mall Dr to William Blount Dr (SR-335)	Blount County	Blount County	2.2	Reconstruct 2-lane road with addition of turn lanes	2030	Exempt	N/A
09-245	Sevierville Rd (SR-35/US-411) Widening	Everett High Rd to Maryville City Limits	Maryville	TDOT	2	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	2030	Non- Exempt	Regionally Significant

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	Length (miles)	Project Description/Type of Improvement	Conformity Analysis Year	Exempt Status	Regional Significance
09-240	Sandy Springs Rd at Montgomery Ln Intersection Improvements	Intersection of Sandy Springs Rd at Montgomery Ln	Maryville	Maryville	0	Intersection improvements including turn lanes and new traffic signal	2030	Exempt	N/A
09-202	Robert C Jackson Dr Extension - Ph I	Middlesettlements Rd to Louisville Rd (SR- 334)	Alcoa	Alcoa	0.7	Construct new 4-lane roadway	2030	Non- Exempt	Regionally Significant
10-260	Foothills Mall Drive Extension Phase II	Foch Street to McCammon Ave	Maryville	Maryville	0.7	Construct new 2-lane road with center turn lane and sidewalks	2030	Non- Exempt	Not Regionally Significant
09-257	Relocated Alcoa Hwy (SR-115/US-129)	Proposed interchange at Tyson Blvd. to Pellissippi Pkwy (SR-162)	Alcoa	TDOT	2.9	Construct new 4-lane divided highway with auxiliary lanes and new interchanges at McGhee Tyson Airport access, Wright Rd and Pellissippi Pkwy (SR-162)	2030	Non- Exempt	Regionally Significant
09-258	Relocated Alcoa Hwy (SR-115/US-129)	Pellissippi Pkwy (SR-162) to South Singleton Station Rd	Alcoa	TDOT	1.3	Construct new 4-lane divided highway with auxiliary lanes and new interchange at Singleton Station Rd	2030	Non- Exempt	Regionally Significant
09-232	Pellissippi Pkwy (SR-162) Extension	Old Knoxville Hwy (SR-33) to SR-73 (US- 321)	Blount County	TDOT	4.4	Construct new 4-lane highway	2030	Non- Exempt	Regionally Significant
09-216	Alcoa Hwy (SR-115/US-129) Widening	Pellissippi Pwy (SR-162) to Little River (Knox/Blount C.L.)	Alcoa	TDOT	3.2	Widen 4-lane to 6-lane with frontage road system and new interchange at Topside Rd (SR-333), Reconfigure existing interchange at Pellissippi Pkwy (SR-162) and signalize ramps	2030	Non- Exempt	Regionally Significant
13-218	Middlesettlements Rd at Miser Station Rd Intersection Improvements	Intersection of Middlesettlements Rd at Miser Station Rd	Blount County	Blount County	0	Realign intersection and add turn lanes	2030	Exempt	N/A
13-215	Louisville Rd (SR-333/SR-334) Reconstruction - Phase 1	Alcoa City Limts to Lackey Creek Bridge	Blount County	TDOT	1.9	Reconstruct 2-lane road with addition of turn lanes	2030	Exempt	N/A
09-213	Old Niles Ferry Road Reconstruction	Maryville City Limits to Calderwood Hwy (SR-115)	Blount County	Blount County	3.3	Reconstruct 2-lane road with addition of turn lanes	2030	Exempt	N/A
09-204	Pellissippi Place Access Road Extension	Pellissippi Place Exist Terminus to Wildwood Rd	Alcoa	Alcoa	1.2	Construct new 2-lane road with center turn lane or median and bicycle/pedestrian facilities	2030	Non- Exempt	Regionally Significant
13-208	Harvest Lane Extension	Existing Harvest Ln terminus to Louisville Rd (SR-334)	Alcoa	Alcoa	0.2	Construct new 2-lane road with sidewalks	2030	Non- Exempt	Not Regionally Significant
13-204	Bessemer Boulevard Phase 1	Hall Rd (SR-35) to N. Wright Rd	Alcoa	Alcoa	1.4	Widen from 2 to 4 lanes with addition of bicycle/pedestrian facilities	2040	Non- Exempt	Regionally Significant
09-212	Old Knoxville Hwy (SR-33) Reconstruction	Wildwood Rd to E. Hunt Rd (SR-335)	Blount County	TDOT	1.3	Reconstruct 2-lane road with addition of turn lanes	2040	Exempt	N/A
09-239	Montvale Rd (SR-336) Widening	Montvale Station Rd to Maryville South City Limits	Maryville	TDOT	2.4	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	2040	Non- Exempt	Not Regionally Significant

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	Length (miles)	Project Description/Type of Improvement	Conformity Analysis Year	Exempt Status	Regional Significance
09-248b	Topside Road (SR-333) Improvements - Phase 2	TVA Lab Rd to Alcoa Hwy (US-129/SR-115)	Alcoa	TDOT	1.3	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	2040	Non- Exempt	Not Regionally Significant
09-207	Wrights Ferry Road Center Turn Lane Improvements	Airbase Rd to Topside Rd	Alcoa	Alcoa	1.4	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	2040	Exempt	N/A
13-205	Bessemer Boulevard Phase 2	Calderwood St to N Hall Rd (SR-35)	Alcoa	Alcoa	0.5	Widen from 2 to 4 lanes with addition of bicycle/pedestrian facilities	2040	Non- Exempt	Regionally Significant
13-203	Robert C Jackson Dr Extension - Ph II	Louisville Rd (SR-334) to US 129 Bypass (SR-115)	Alcoa	Alcoa	0.5	Construct new 4-lane roadway and grade separated interchange connecting US-129 and Associates Boulevard	2040	Non- Exempt	Regionally Significant
09-223	Carpenters Grade Rd Reconstruction and Intersection Improvements	Raulston Rd to Kirkland Estates Blvd	Maryville	Maryville	0.7	Reconstruct 2-lane road with addition of turn lanes and sidewalk. Construct roundabout at Peterson Ln, Cochran Rd and Raulston Rd intersection.	2040	Exempt	N/A
09-241	Tuckaleechee Pike Reconstruction	US 321 to Grandview Dr	Maryville	Maryville	1.1	Reconstruct 2-lane road with addition of turn lanes and sidewalk	2040	Exempt	N/A
09-243	Wilkinson Pike Widening	Court Street to City Limits	Maryville	Maryville	0.9	Reconstruct 2-lane road with addition of turn lanes and sidewalk	2040	Exempt	N/A
09-231	Old Knoxville Hwy (SR-33) Reconstruction - Rockford	Pellissippi Pkwy (SR-162) to Knox County Line	Blount County	TDOT	4.6	Reconstruct 2-lane road with addition of turn lanes	2040	Exempt	N/A
09-220	Home Avenue Extension	McCammon Ave to Calderwood St	Alcoa	Alcoa	0.2	Construct new 2-lane road with center turn lane to extend Home Ave through existing shopping center to Calderwood St	2040	Non- Exempt	Not Regionally Significant
09-250	Sevierville Rd (SR-35/US-411) Reconstruction	Swanee Dr (Maryville City Limits) to Chapman Hwy (US-441/SR-71)	Blount County	TDOT	11.9	Reconstruct 2-lane road with addition of turn lanes	2040	Exempt	N/A
09-249	Montvale Rd (SR-336) Reconstruction	Maryville City Limits to Six Mile Rd	Blount County	TDOT	4.4	Reconstruct 2-lane road with addition of turn lanes	2040	Exempt	N/A
13-216	Louisville Rd (SR-333) Reconstruction - Phase 2	Lackey Creek Bridge to Old Lowes Ferry Rd	Blount County	TDOT	2.3	Reconstruct 2-lane road with addition of turn lanes	2040	Exempt	N/A
Knox Co	ounty Projects								
13-602	Knoxville Advanced Traffic Management System - Phase 1	Kingston Pike (US-70/SR-1) from Metron Center Way to Lovell Rd (12 miles) and Broadway (US-441/SR-33) from Jackson Ave to Foley Dr (7 miles)	Knoxville	Knoxville	19	Purchase, installation and integration of signal controllers, signal monitors, closed loop equipment and software. Project also includes development of new signal timing plans for the new equipment and software	2022	Exempt	N/A
13-1001	Old Stage Rd/Kingston Pk Greenway Connector	Old Stage Rd.to near Everett Rd.	Farragut	Farragut	0.4	Construction of an 8 foot asphalt greenway from the north side of Kingston Pk. near Everett Rd., under the existing Kingston Pk. bridge over Little Turkey Creek to Way Station Trail , just north of its terminus near Old Stage Rd.	2022	Exempt	N/A
13-1003	Chapman Highway Advanced Traffic Management System	Chapman Hwy (US-441/SR-71) from Mountain Grove Dr to Blount Ave	Knoxville	Knoxville	6.3	Expand the City of Knoxville's Advanced Traffic Management System along Chapman Highway.	2022	Exempt	N/A

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	Length (miles)	Project Description/Type of Improvement	Conformity Analysis Year	Exempt Status	Regional Significance
13-1004	Liberty Street Multimodal Project	Middlebrook Pike (SR-169) to Sutherland Avenue	Knoxville	Knoxville	1.1	Addition of sidewalks and bicycle facilities along Liberty and Division Streets.	2022	Exempt	N/A
13-816	Knox County Advanced Traffic Management System - Phase 1	Cedar Bluff Rd from Sherrill Blvd to Middlebrook Pk (SR-169) (1.3 miles) and Maynardville Pk from Rifle Range Rd to E. Emory Rd (2.0 miles)	Knox County	Knox County	3.3	Cedar Bluff Rd from Sherrill Blvd to Middlebrook Pk (SR-169) (1.3 miles) and Maynardville Pk from Rifle Range Rd to E. Emory Rd (2.0 miles)	2022	Exempt	N/A
13-813	Farragut Advanced Traffic Management System - Phase 1	All 26 Signailzed Intersections within Town Limits	Farragut	Farragut		Upgrade signal communications and equipment at all signalized intersections within the Town to allow for a centrally controlled signal system	2022	Exempt	N/A
13-863	Knox/Blount Greenway - Phase II	Connect Phase I to Alcoa Highway Bridge over the Little River at the Blount County Line to connect to I.C. King Park.	Knox County	Knox County	5.5	Construction of an off-road trail that will connect Phase I of the Knox Blount Greenway to existing pedestrian and bicycle facilities on Alcoa Highway Bridge.	2022	Exempt	N/A
13-1006	East Knoxville Sidewalk Improvements	S. Castle St. from Martin Luther King Jr. Ave. to Wilson Ave.	Knoxville	Knoxville	0.3	Complete a sidewalk network between a high school and nearby neighborhoods along S. Castle St. Approximately 1,400 linear feet of sidewalk.	2022	Exempt	N/A
13-838	First Creek Greenway - Broadway Streetscape	Woodland Ave to Cecil Ave	Knoxville	Knoxville	0.3	Construct a new shared use path extending First Creek Greenway from near Cecil Ave to near Woodland Ave	2022	Exempt	N/A
17-911	Tyson Fort Sanders Bike Connection	Fort Sanders Neighborhood to Tyson Park	Knoxville	Knoxville	0.5	Construct new shared use path between Fort Sanders Neighborhood and Tyson Park	2022	Exempt	N/A
17-901	East Knox Greenway - Phase 1	Willow Ave to Knoxville Botanical Gardens	Knoxville	Knoxville	1.6	Construct a new shared use path connecting First Creek Greenway to Knoxville Botanical Gardens and Arboretum	2022	Exempt	N/A
13-880	Atlantic Avenue Sidewalk	Pershing St to Broadway	Knoxville	Knoxville	0.6	Construct 3,000 linear feet of sidewalks on Atlantic Ave between Pershing St and Broadway	2022	Exempt	N/A
17-910	Tazewell Pike Sidewalk	Old Broadway to Jacksboro Pk	Knoxville	Knoxville	0.6	Construct sidewalk along Tazewell Pike from Old Broadway to Jacksboro Pike	2022	Exempt	N/A
09-626	Chapman Hwy (SR-71/US-441) Operational and Safety Improvements - Knox County	Mountain Grove Dr to Knox/Blount County Line	Knox County	TDOT	2.8	Operational and safety improvements including turn lanes at various locations along the corridor.	2022	Exempt	N/A
09-626a	Chapman Hwy (SR-71/US-441) Operational and Safety Improvements - City of Knoxville	Blount Ave to Mountain Grove Dr	Knoxville	Knoxville	6.2	Implementation of various improvement strategies to increase safety for all modes of transportation such as access management, intersection improvements and bicycle/pedestrian accommodations	2022	Exempt	N/A
09-626b	Chapman Hwy (US-441/SR-71)	Evans Rd to Burnett Ln	Knox County/Sevier County	TDOT	0.9	Add center turn lane	2022	Non- Exempt	Regionally Significant
09-626d	Chapman Hwy (US-441/SR-71)	Hendron Chapel Rd to Simpson Rd	Knox County	TDOT	0.9	Add center turn lane	2022	Non- Exempt	Regionally Significant
17-606	Magnolia Avenue Streetscape - Phase 1	Jessamine St to Myrtle St	Knoxville	Knoxville	0.2	Construct streetscape improvements in the existing right of way that include raised medians replacing center left-turn lane, signal improvements, bike lanes, improved sidewalks, bus pull-offs, and amenities	2022	Exempt	N/A
17-607	Magnolia Avenue Streetscape - Phase 2	Myrtle St to N. Bertrand St	Knoxville	Knoxville	0.2	Construct streetscape improvements in the existing right of way that include raised medians replacing center left-turn lane, signal improvements, bike lanes, improved sidewalks, bus pull-offs, and amenities	2022	Exempt	N/A
10-697	North Central Street Road Diet and Streetscape	Woodland Ave to Depot St	Knoxville	Knoxville	1.2	Road diet and streetscape along North Central Street, reducing four lanes to two lanes with center turn lane	2022	Non- Exempt	Not Regionally Significant
09-617	South Knoxville Waterfront Roadway Improvements	Sevier Ave from Davenport Rd to new roundabout at Island Home Ave	Knoxville	Knoxville	0.3	Construct roadway streetscape improvements and utility relocations along Sevier Ave and new roundabout at the intersection of Foggy Bottom/Seiver Ave/Island Home Ave.	2022	Exempt	N/A

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	Length (miles)	Project Description/Type of Improvement	Conformity Analysis Year	Exempt Status	Regional Significance
13-834	Kingston Pike Sidewalk in Farragut	Old Stage Rd to Virtue Rd	Farragut	Farragut	0.4	Construct sidewalk along the southern side of Kingston Pike between Old Stage Road and Virtue Road	2022	Exempt	N/A
09-632	Concord Road (SR-332) Widening	Turkey Creek Rd. to Northshore Dr. (SR-332)	Farragut	TDOT	0.8	Widen roadway to 4-lanes with median/center turn lane and new bicycle/pedestrian facilities	2022	Non- Exempt	Regionally Significant
17-601	Asheville Hwy/Magnolia Ave/Rutledge Pk Intersection Study	N/A	Knoxville	Knoxville	0	Conduct a planning study to investigate multi-modal improvement options at this location	2022	Exempt	N/A
09-616	Pleasant Ridge Road	Merchant Dr to Knoxville City limits (Country Brook Dr)	Knoxville	Knoxville	1.6	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities - Scope Change from previous Plan, was a continuous center turn lane and included section of adjoining road (Merchant Dr)	2022	Exempt	N/A
17-609	Safer and Complete Streets Study	N/A	Knoxville	Knoxville		Conduct a planning study to identify and prioritize projects to correct safety deficiencies on non-state maintained federal aid routes in the City of Knoxville	2022	Exempt	N/A
17-604	Jackson Avenue Ramps	Ramps from Jackson Ave to Gay St Intersection	Knoxville	Knoxville	0.1	Replacement of existing ramps from Gay Street to Jackson Avenue	2022	Exempt	N/A
09-625	Schaad Rd Widening	Oak Ridge Hwy. (SR-62) to Pleasant Ridge Rd.	Knox County	Knox County	1.5	Widen from 2 to 4 lanes with addition of sidewalks	2022	Non- Exempt	Regionally Significant
09-634	Pellissippi Pkwy/Hardin Valley Interchange	Interchange at Hardin Valley Rd	Knox County	TDOT		Reconfigure existing interchange to improve capacity, safety and operations. Add new northbound on-ramp in northeast quadrant.	2022	Non- Exempt	Regionally Significant
13-601	Union Rd/N Hobbs Rd Reconstruction	Union Road from N, Hobbs Road to Everett Road (approx. 4,500 ft); N. Hobbs Road from Kingston Pike (SR-1) to Union Road (approx. 750 ft)	Farragut	Farragut	1	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	2022	Exempt	N/A
09-618	I-275 Industrial Park Access Improvements	Blackstock Ave: Extend from W. Fifth Ave. to Bernard Ave. Marion St: Realign between Bernard Ave. and Baxter Ave. Improve intersections of University Ave. with W. Fifth Ave. and Bernard Ave. Add greenway between W. Fifth Ave. and Baxter Ave.	Knoxville	Knoxville	0.5	Roadway and intersection improvements to enhance access to I-275 Business Park. Blackstock Ave: extend from Fifth Ave. to Bernard Ave.; Marion St: realign; University Ave: intersections with W Fifth Ave. and Bernard Ave.	2022	Non- Exempt	Regionally Significant
17-801	Knoxville Advanced Traffic Management System - Phase 2	Citywide	Knoxville	Knoxville		Additional upgrades of the City traffic signal system following Phase 1.	2022	Exempt	N/A
17-603	Chapman Hwy Planning Study	Blount Ave to Mountain Grove Dr	Knoxville	Knoxville	6.2	Conduct study to develop prioritized project list by integrating existing plans.	2022	Exempt	N/A
09-605	Schaad Rd Extension	Middlebrook Pk (SR 169) to W of Oak Ridge Hwy (SR 62)	Knox County	Knox County	4.6	Construct new 4-lane roadway with sidewalks	2022	Non- Exempt	Regionally Significant
17-605	Knoxville Center Mall Area Circulation Study	N/A	Knoxville	Knoxville		Conduct a planning study of the Knoxville Center and I-640 Interchange and frontage roads including a feasibility study to add a new exit from I640	2022	Exempt	N/A
09-635	Karns Connector	Oak Ridge Hwy (SR-62) to Westcott Blvd	Knox County	Knox County	0.8	Construct new 2-lane road with center turn lane	2022	Non- Exempt	Not Regionally Significant
17-909	Sidewalk Strategic Study	N/A	Knoxville	Knoxville		Conduct a planning study to determine and prioritize sidewalk needs in City of Knoxville.	2022	Exempt	N/A
09-628	Alcoa Hwy (SR-115/US-129) Widening	North of Little River (Knox/Blount C.L.) to Maloney Rd	Knoxville	TDOT	2.4	Widen from 4 to 6 lanes including pedestrian and bicycle facilities.	2022	Non- Exempt	Regionally Significant
09-623	Pellissippi Pkwy (I-140) and Dutchtown Rd Interchange	I-40 to Dutchtown Rd	Knoxville	TDOT	0.4	Widen I-140 from 1 to 2 lanes northbound and lengthen storage of northbound off-ramp at Dutchtown Road interchange	2022	Non- Exempt	Regionally Significant
09-662	I-75 at Merchant Dr Interchange	I-75 at Merchant Dr Interchange	Knoxville	TDOT	0	Increase northbound off-ramp storage as part of the Ramp Queue Safety Program.	2022	Exempt	N/A

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	Length (miles)	Project Description/Type of Improvement	Conformity Analysis Year	Exempt Status	Regional Significance
09-652	I-75 at Emory Rd (SR-131) Interchange	I-75 at Emory Rd (SR-131) Interchange	Knoxville	TDOT	0	Reconfigure existing interchange to improve capacity, safety and operations.	2022	Exempt	N/A
17-612	I-40 at Asheville Hwy (SR-9) Interchange	I-40 at Asheville Hwy (SR-9) Interchange	Knoxville	TDOT	0	Increase eastbound off-ramp storage as part of the Ramp Queue Safety Program.	2022	Exempt	N/A
09-661	I-75 at Callahan Dr Interchange	I-75 at Callahan Dr Interchange	Knoxville	TDOT	0	Increase southbound off-ramp storage as part of the Ramp Queue Safety Program.	2022	Exempt	N/A
13-884	Chapman Highway Multiuse Path	Young High Pk to Stone Rd	Knoxville	Knoxville	0.8	Construct a new shared use path along Chapman Highway from Young High Pike to Stone Road	2030	Exempt	N/A
17-850	South Waterfront Greenway - East of Suttree	Suttree Landing Park to Riverside Landing Park	Knoxville	Knoxville	1.9	Construct a new shared use path along the Tennessee River connecting South Waterfront Greenway to Will Skelton Greenway and across the river to James White Greenway/Neyland Greenway/Morningside Greenway	2030	Exempt	N/A
09-689	Papermill Drive Complete Street	Weisgarber Rd to Kingston Pk (SR-1)	Knoxville	Knoxville	0.6	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	2030	Exempt	N/A
13-852	Knoxville South Waterfront Pedestrian/Bicycle Bridge	University of Tennessee campus to Scottish Pike	Knoxville	Knoxville	0.3	Construct a new pedestrian/bicycle bridge over the Tennessee River connecting the South Knoxville Waterfront redevelopment area to the University of Tennessee	2030	Exempt	N/A
17-608	Magnolia Avenue Streetscape - Phase 3 and 4	N. Bertrand St to Cherry St	Knoxville	Knoxville	0.9	Construct streetscape improvements in the existing right of way that include raised medians replacing center left-turn lane, signal improvements, bike lanes, improved sidewalks, bus pull-offs, and amenities	2030	Exempt	N/A
09-658	Northshore Drive at Kingston Pike Intersection Improvements	Intersection of Northshore Dr and Kingston Pk	Knoxville	Knoxville	0	Intersection Improvements	2030	Exempt	N/A
09-637	Lovell Rd Widening (SR-131)	Cedardale Ln. to Middlebrook Pk. (SR- 169)	Knox County	Knox County	1.7	Widen 2-lane to 4-lane, including pedestrian and bicycle facilities.	2030	Non- Exempt	Regionally Significant
17-602	Cecil Ave and Broadway Realignment	Intersection of Cecil Ave at Broadway	Knoxville	Knoxville	0	Realign Cecil Avenue at North Broadway to tie into the existing Broadway Plaza access just north of Cecil Avenue	2030	Exempt	N/A
09-649	Pellissippi Pkwy (SR-162)/Oak Ridge Hwy Interchange	Interchange at Oak Ridge Hwy (SR-62)	Knox County	TDOT		Reconstruct interchange to provide ramp for westbound to southbound movement	2030	Non- Exempt	Regionally Significant
13-603	I-40/75 Auxiliary Lanes	Campbell Station Rd Interchange to Lovell Rd Interchange	Farragut	TDOT	1.4	Construct eastbound and westbound auxiliary lanes between interchanges	2030	Non- Exempt	Regionally Significant
09-647	Pellissippi Pkwy (SR-162)	Edgemoor Rd (SR-170) to Dutchtown Rd	Knox County	TDOT	6	Corridor safety and capacity improvements to include access control, interchange reconstruction, frontage roads, auxiliary lanes and provision for a shared use path	2030	Non- Exempt	Regionally Significant
09-653	Alcoa Hwy (SR-115/US-129) Widening	Woodson Dr. to Cherokee Trail interchange	Knoxville	TDOT	1.3	Widen 4-lane to 6-lane including pedestrian and bicycle facilities.	2030	Non- Exempt	Regionally Significant
17-913	Westland Drive Bike Lane	Morrell Rd to Northshore Dr (SR-332)	Knoxville	Knoxville	1.9	Construct bicycle lanes along both sides of roadway	2030	Exempt	N/A
10-699	Kingston Pike (SR-1) at Campbell Station Rd Intersection Improvements	Intersection of Kingston Pike and Campbell Station Rd.	Farragut	Farragut	0.4	Construct additional eastbound left turn lane on Kingston Pike	2030	Exempt	N/A
09-629	I-40/I-75/Campbell Station Road Interchange	Interchange of I-40/75 at Campbell Station Rd	Farragut	TDOT	0	Reconfigure existing interchange to improve capacity, safety and operations.	2030	Exempt	N/A
09-645	Northshore Dr (SR-332)	Morrell Rd to Ebenezer Rd	Knox County	TDOT	3.5	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	2030	Exempt	N/A
09-643	Emory Rd (SR-131)	Maynardville Hwy (SR-33) to Tazewell Pk (SR-331)	Knox County	TDOT	4.9	Widen from 2 to 4 lanes	2030	Non- Exempt	Regionally Significant
09-638	Oak Ridge Hwy (SR-62)	Schaad Rd to Byington Beaver Ridge Rd	Knox County	TDOT	4.2	Widen from 2 to 4 lanes	2030	Non- Exempt	Regionally Significant
09-654	1-75/I-640/I-275 Interchange	I-75/I-640/I-275 Interchange	Knoxville	TDOT	1.6	Interchange improvements to include additional through lanes on I-75 north and southbound ramps.	2030	Non- Exempt	Regionally Significant

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	Length (miles)	Project Description/Type of Improvement	Conformity Analysis Year	Exempt Status	Regional Significance
13-844	First Creek Greenway - Downtown East	Caswell Park to Morningside Park	Knoxville	Knoxville	1.4	Construct a new shared use path along First Creek connecting Caswell Greenway to Morningside Greenway	2040	Exempt	N/A
13-855	First Creek Greenway - North Knox	Edgewood Park to Mineral Springs Ave	Knoxville	Knoxville	1.3	Construct a new shared use path along First Creek connecting Edgewood Park to the proposed First Creek Greenway - Old Broadway segment at Mineral Springs Avenue	2040	Exempt	N/A
09-615	Washington Pike	North of I-640 to Murphy Rd	Knoxville	Knoxville	1.7	Widen from 2 to 4 lanes	2040	Non- Exempt	Regionally Significant
09-673	Oak Ridge Hwy (SR-62)	Byington Beaver Ridge Rd (SR-131) to Pellissippi Pkwy (SR-162)	Knox County	TDOT	4.2	Widen from 2 to 4 lanes	2040	Non- Exempt	Regionally Significant
09-651	I-40/I-75/Watt Rd Interchange	Interchange at Watt Rd	Knox County	Knox County		Reconfigure existing interchange to improve capacity, safety and operations.	2040	Exempt	N/A
09-691	I-40/75 Widening	I-40/75 Interchange to Campbell Station Rd Interchange	Farragut	TDOT	5.3	Widen from 6 to 8 lanes	2040	Non- Exempt	Regionally Significant
09-644	Gov John Sevier Hwy (SR-168)	Alcoa Hwy (SR-115/US-129) to Chapman Hwy (US-441/SR-71)	Knox County	TDOT	6.5	Widen from 3 to 4-lane divided roadway	2040	Non- Exempt	Regionally Significant
17-903	Lonsdale Greenway	Baxter Ave to Western Ave	Knoxville	Knoxville	2.7	Construct a new shared use path through Lonsdale, connecting the proposed section of Second Creek Greenway in Happy Holler to Lonsdale Park and Western Avenue	2040	Exempt	N/A
13-854	Baker Creek Greenway	Maynard Glenn Park to Island Home Ave	Knoxville	Knoxville	1	Construct a new shared use path along Baker Creek, connecting Maynard Glenn Park, Mary James Park, to the proposed South Waterfront Greenway	2040	Exempt	N/A
09-669	Everett Road Improvements	Watt Rd to Split Rail Ln	Farragut	Farragut	2.5	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	2040	Exempt	N/A
09-630	Virtue Road Reconstruction	Boyd Station Rd to Kingston Pk (US-70/SR-	Farragut	Farragut	1.4	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	2040	Exempt	N/A
09-668	Kingston Pike (SR-1) Widening	Smith Rd to Campbell Station Rd	Farragut	TDOT	1.4	Widen from 4 to 6 lanes with addition of bicycle/pedestrian facilities	2040	Non- Exempt	Regionally Significant
09-646	Northshore Dr (SR-332)	Pellissippi Pkwy (SR-162) to Concord Rd (SR-332)	Knox County	TDOT	4.5	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	2040	Exempt	N/A
09-675	Maryville Pk (SR-33)	Gov John Sevier Hwy (SR-168) to Blount County Line	Knox County	TDOT	1.2	Reconstruct 2-lane road with addition of turn lanes	2040	Exempt	N/A
09-636	W. Emory Rd (SR-131)	Oak Ridge Hwy (SR-62) to Clinton Hwy (US-25W/SR-9)	Knox County	TDOT	5	Reconstruct 2-lane road with addition of turn lanes	2040	Exempt	N/A
09-679	I-75 at Raccoon Valley Rd (SR-170) Interchange	I-75 at Raccoon Valley Rd (SR-170) Interchange	Knox County	TDOT		Reconfigure existing interchange to improve capacity, safety and operations	2040	Exempt	N/A
09-692	I-75 Widening	Emory Rd (SR-131) to Raccoon Valley Rd (SR-170)	Knox County	TDOT	5.3	Widen from 4 to 6 lanes	2040	Non- Exempt	Regionally Significant
09-693	I-40/Gov John Sevier Hwy New Interchange	New Interchange	Knox County	TDOT		Construct new interstate interchange	2040	Non- Exempt	Regionally Significant
Loudon	County Projects								
09-402	Lenoir City Downtown Streetscapes - Phase 2	Broadway St (US-11/SR-2) from C Street to A Street (0.14 miles) and from Kingston Street to Grand Street (0.19 miles) and B Street between 1st Avenue and Broadway Street (0.07 miles)	Lenoir City	Lenoir City	0.4	Streetscape improvements along Hwy. 11/S.R. 2 (Broadway) between Grand Street and C Street, and B Street between 1st Avenue and Broadway Street	2022	Exempt	N/A
13-403	Tellico Parkway at SR 72	Intersection of Tellico Pkwy (SR-444) and Hwy 72 (SR-72)	Loudon County	Loudon County	0	Construction of 5 to 7 light standards along 1500 feet. Installation of aluminum poles, conduit, wiring, transformer and luminaries	2022	Exempt	N/A
13-401	Simpson Road Reconstruction	US-321 (SR-73) to Shaw Ferry Rd.	Lenoir City	Lenoir City	0.7	Reconstruct 2-lane road with addition of turn lanes and sidewalk along one side	2022	Exempt	N/A
13-812	Lenoir City ITS: Signal System Design	U.S. 11 from G St to U.S. 321 (1.2 miles) and U.S. 321 from U.S. 11 to I-75 SB ramps (2.7 miles)	Lenoir City	Lenoir City	3.9	The project is to design and implement ITS signal system for 20 coordinated signals along US-321/SR-73 and US-11/SR-2.	2022	Exempt	N/A

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

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KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	Length (miles)	Project Description/Type of Improvement	Conformity Analysis Year	Exempt Status	Regional Significance
09-407	US-11 Realignment Project at Loudon High School	Intersection of US-11(SR-2) at Loudon High School	City of Loudon	City of Loudon	0.05	Intersection Improvements	2022	Exempt	N/A
17-404	Highland Avenue Resurfacing & Sidewalk Project	US-11 (SR-2) to Carding Machine Rd	City of Loudon	City of Loudon	0.6	Resurface roadway and improve sidewalks	2022	Exempt	N/A
17-407	US 11 at Industrial Park Drive Intersection Improvement	Intersection of US 11 at Industrial Park Dr	Lenoir City	Lenoir City	0.2	Intersection improvements including turn lanes and new traffic signal	2022	Exempt	N/A
17-802	Loudon Intelligent Transportation System	Signalized intersections within city limits on U.S. Hwy 11 and State Route 72. U.S. 11 from SR 72 to Blair Bend Rd (2.7 miles) and SR 72 from Stekee St to Carding Machine Rd (1.3 miles).	City of Loudon	City of Loudon	4	Replace four signals to include vehicle detection and outfit seven intersections with signal system communication and coordination infrastructure. Provide signal timing improvements within the city.	2022	Exempt	N/A
17-406	Harrison Road at Norwood Dr Intersection Improvement	Intersection of Harrison Rd at Norwood Dr	Lenoir City	Lenoir City	0.1	Intersection improvements to add turn lane and increase sight distance	2022	Exempt	N/A
17-401	Blair Bend Dr/Williamson Dr Resurfacing	Blair Bend Road from U.S. Hwy 11 (SR-2) to Blair Bend Road	City of Loudon	City of Loudon	1.9	Resurface roadway	2022	Exempt	N/A
17-415	Tellico Parkway (SR-444) Safety Improvement Project	Coyatee Dr to Tugaloo Rd (north of Chota Rd)	Loudon County	Loudon County	0.6	Addition of left turn lanes at Coyatee Drive, Tugaloo Road and Ritchey Road	2022	Exempt	N/A
13-402	Queener Road Reconstruction	SR-72 to River Rd.	City of Loudon	City of Loudon	0.7	Reconstruct 2-lane roadway	2022	Exempt	N/A
17-416	Muddy Creek Road Intersection Realignment	Intersection of Muddy Creek Rd at Virtue Rd	Loudon County	Loudon County	0.1	Realign intersection and add turn lanes	2022	Exempt	N/A
17-414	Prospect Church Rd Resurfacing	Hwy 72 South to Hwy 72 North	Loudon County	Loudon County	3	Resurface roadway	2022	Exempt	N/A
17-412	Martel Road Resurfacing	Oak St to Knox County Line	Loudon County	Loudon County	4.3	Resurface roadway	2022	Exempt	N/A
17-413	Northshore Drive Resurfacing	Beals Chapel Rd to Knox County Line	Loudon County	Loudon County	2.2	Resurface roadway	2022	Exempt	N/A
17-411	Buttermilk Road Resurfacing	White Wing Rd to Knox County Line	Loudon County	Loudon County	5.2	Resurface roadway	2022	Exempt	N/A
17-417	J. Carmichael Greer Bike/Pedestrian Conversion Project	City Park Drive to Tellico Parkway/Highway 444	Loudon County	Loudon County	1.44	Conversion of existing 2-lane vehicle bridge and approaches at Fort Loudoun Dam to a pedestrian and bicycle shared use path	2022	Exempt	N/A
09-410	US-321 (SR-73) at US-11 (SR-2) Intersection Improvements	US-321 (SR-73) at US-11 (SR-2) Intersection	Lenoir City	TDOT	0	Intersection Improvements	2022	Exempt	N/A
09-423	US-321 (SR-73) Widening	E. Simpson Rd to north of SR-2 (US-11) in Lenoir City	Lenoir City	TDOT	1.4	Widen from 4 to 6 lanes	2022	Non- Exempt	Regionally Significant
17-410	Kingston Street Realignment Project	Kirk Ave to Wilson St	Lenoir City	Lenoir City	0.1	Relocate approximately 650' of Kingston Street 75' to the north to eliminate a horizontal curve.	2030	Exempt	N/A
17-409	Kingston Street at Rock Springs Road Intersection Improvement	Intersection of Kingston St at Rock Springs Rd	Lenoir City	Lenoir City	0.1	Intersection improvements and addition of sidewalk	2030	Exempt	N/A
09-416	US 11 (SR-2) Realignment & Widening	Oak St to Kingston Pk (US-70/SR-1)	Loudon County	TDOT	5.1	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	2030	Exempt	N/A

Table D-2: Mobility Plan 2040 Project List – Exempt and Regional Significance Status

KRMP ID	Project Name/Route	Termini	Jurisdiction	Lead Agency	Length (miles)	Project Description/Type of Improvement	Conformity Analysis Year	Exempt Status	Regional Significance
17-402	Carding Machine Road Resurfacing	Highland Ave to SR-72	City of Loudon	City of Loudon	1.4	Resurface roadway	2030	Exempt	N/A
17-403	Grove Street Resurfacing	US-11 to SR-72	City of Loudon	City of Loudon	1.3	Resurface roadway and add left turn lane on Hwy 72	2030	Exempt	N/A
Sevier C	ounty Projects								
09-508	Chapman Hwy (US-441/SR-71) Widening	Boyds Creek Hwy (SR-338) to Macon Ln	Sevier County	TDOT	1.2	Add center turn lane	2022	Non- Exempt	Regionally Significant
Transit	Capital Projects								
13-861	Knoxville-Knox CAC Transit Capital Project	N/A	CAC	CAC		Purchase of demand response transit vehicles for fleet replacement	2022	Exempt	N/A
13-862	CAC Volunteer Assisted Transportation	N/A	CAC	CAC		Purchase of vehicles for assisted demand response transit services	2022	Exempt	N/A
17-1002	ETHRA Transit Vehicle Replacement Project	N/A	ETHRA	ETHRA		Purchase of demand response transit vehicles for fleet replacement	2022	Exempt	N/A
17-1005	KAT Purchase of ADA Paratransit Vans	N/A	KAT	KAT		Purchase of ADA Paratransit Vans for fleet replacement or minor expansion	2022	Exempt	N/A
17-1006	KAT Express Transit Service Enhancement - Broadway Transit Signal Priority Implementation	N/A	KAT/Knoxville	KAT/Knoxville		Implementation of traffic signal and transit enhancements to create a new express BRT route along existing KAT Broadway Route 22. Features include installation of transit signal priority technology, new BRT stops equipped with passenger information systems and potential queue jump applications.		Exempt	N/A
17-1007	Purchase KAT Vehicles - Fixed Route Buses	N/A	KAT	KAT		Purchase of fixed-route buses for fleet replacement or minor expansion	2022	Exempt	N/A
17-1008	Purchase KAT Vehicles - Fixed Route Trolley Buses	N/A	KAT	KAT		Purchase of fixed-route trolley buses for fleet replacement or minor expansion	2022	Exempt	N/A
17-1009	KAT Implementation of ITS Technologies	N/A	KAT	KAT		Technology upgrades including improved automated vehicle location (AVL), electronic passenger information systems, onboard WiFi, automated passenger counters, mobile fare payment, bus diagnostics, safety systems, traffic management and communication systems	2022	Exempt	N/A
17-1010	Purchase KAT Vehicles - Neighborhood Service Buses	N/A	KAT	KAT		Purchase of neighborhood service buses for fleet replacement or minor expansion	2022	Exempt	N/A

D.4 FY 2017-2020 TRANSPORTATION IMPROVEMENT PROGRAM PROJECT LIST CROSSWALK

Table D-3 is a list of the projects included in the TPO's FY 2017-2020 Transportation Improvement Program (TIP) that includes the project's Mobility Plan project ID to provide a crosswalk between the TIP and the Mobility Plan. The FY 2017-2020 TIP is being amended concurrently with the adoption of the 2040 Mobility Plan in order to ensure consistency between the two plans at all times. The FY 2017-2020 TIP must be a direct subset of the current LRTP and must include all regionally significant highway projects that are programmed to receive funds regardless of funding source. Generally, most projects that are programmed funding in the FY 2017-2020 TIP fall within the first horizon year period of the Mobility Plan which is 2022. There are some exceptions to this however in the cases of projects with early stages of work being programmed such as preliminary engineering, or for some of the larger scope projects that may take several years to construct and be open to traffic. Finally, there are some air quality exempt projects that may not be specifically listed in the Mobility Plan, but instead have been found to be consistent with one of the primary goals identified in the Mobility Plan. An example of this is TIP Project ID # 17-2014-225 (TPO Bike Parking Program), which was determined to be exempt from air quality conformity and consistent with Mobility Plan Goal 2 (More Options). Following is a list of the goals contained in the 2040 Mobility Plan update:

	Mobility Plan 2040 Goals
Goal 1: Maintenance and efficiency	Preserve and maintain our existing infrastructure through repaving projects, bridge replacements, access management, sidewalk repairs, and intersection improvements
Goal 2: More Options	Improve access to services and employment with bicycle and pedestrian facilities, and transit services
Goal 3: Safety and security Goal 4: Health and environment	Reduce rates of crashes with serious injuries and fatalities. Reduce the region's vulnerability to incidents and threats Minimize negative impacts on the environment and people's health, and increase access to active transportation/physical activity for all ages
Goal 5: Equitable access	Connect communities to opportunities and services throughout the region, particularly areas with high proportions of low income, senior, and minority populations
Goal 6: Congestion reduction	Use our system more efficiently through technology like traffic signal coordination, real-time traffic info, and emergency response vehicles
Goal 7: Preservation of Places	Preserve natural and cultural areas and places that make our region unique (e.g. mountains, open space, farmland, viewsheds, small communities)
Goal 8: Economy and freight	Improve intermodal connections to help move freight to and through the region, reduce delay on major freight corridors Support business attraction and retention

Table D-3: FY 2017-2020 Transportation Improvement Program/Mobility Plan Project List Crosswalk

TIP ID	Mobility Plan ID	Route	Description	Lead Agency	TIP Highest Phase of Work Programmed	TIP Fiscal Year	Mobility Plan Horizon Year	Air Quality Status
17-2014-001	09-618	I-275 Business/Industrial Park Access Improvements	Roadway and intersection improvements to enhance access to I-275 Business Park. Blackstock Ave: extend from Fifth Ave. to Bernard Ave.; Marion St: realign; University Ave: intersections with W Fifth Ave. and Bernard Ave.	City of Knoxville	CON	2017	2022	Non-Exempt
17-2014-002	09-637	Lovell Rd. (SR-131) Widening	Widen 2-lane to 4-lane, including pedestrian and bicycle facilities.	Knox County	PE-D	2018	2026	Non-Exempt
17-2014-003	09-216	Alcoa Hwy. (SR-115 / US-129)	Widen 4-lane to 6-lane with frontage road system and new interchange at Topside Rd (SR-333). Reconfigure existing interchange at Pellissippi Pkwy (SR-162) and signalize ramps	TDOT	ROW	2017	2026	Non-Exempt
17-2014-004	09-628	Alcoa Hwy. (SR-115 / US-129)	Widen from 4 to 6 lanes including pedestrian and bicycle facilities.	TDOT	CON	2018	2022	Non-Exempt
17-2014-005	09-218	Relocated Alcoa Hwy. (SR-115 / US-129)	Widen from 4-lane divided to a 6-lane divided highway. Extend Tyson Boulevard under SR-115 and reconstruct Hunt Rd overpass.	TDOT	CON	2018	2022	Non-Exempt
17-2014-006	09-605	Schaad Rd. Widening	Construct new 4-lane roadway with sidewalks	Knox County	CON	2018	2022	Non-Exempt
17-2014-007	13-211	Foothills Mall Dr. Extension	Construct new 2-lane road with center turn lane and sidewalks	Maryville	CON	2019	2022	Non-Exempt
17-2014-009	13-402	Queener Rd. Reconstruction	Reconstruct 2-lane roadway	City of Loudon	CON	2017	2022	Exempt
17-2014-010	13-834	Kingston Pk. Sidewalk in Farragut	Construct sidewalk along the southern side of Kingston Pike between Old Stage Road and Virtue Road	Farragut	CON	2017	2022	Exempt
17-2014-015	13-401	Simpson Rd. Reconstruction	Reconstruct 2-lane road with addition of turn lanes and sidewalk along one side	Lenoir City	CON	2017	2022	Exempt
17-2014-019	13-403	Tellico Pkwy. / Hwy. 72 Intersection Lighting	Construction of 5 to 7 light standards along 1500 feet. Installation of aluminum poles, conduit, wiring, transformer and luminaries	Loudon County	CON	2017	2022	Exempt
17-2014-024	13-1001	Old Stage Rd. / Kingston Pk. Greenway Connector	Construction of an 8 foot asphalt greenway from the north side of Kingston Pk. near Everett Rd., under the existing Kingston Pk. bridge over Little Turkey Creek to Way Station Trail , just north of its terminus near Old Stage Rd.	Farragut	CON	2019	2022	Exempt
17-2014-025	09-232	Pellissippi Pkwy. (SR-162) Extension	Construct new 4-lane highway	TDOT	CON	2020	2026	Non-Exempt
17-2014-028	13-1002	Pistol Creek Greenway - Phase IV	Construction of 10 foot wide greenway trail and amenities consisting of approximately 11,716 linear feet of asphaltic trail and 200 feet of wood boardwalk generally paralleling Pistol Creek.	City of Alcoa	CON	2017	2022	Exempt
17-2014-031	10-697	N.Central St. Road Diet and Streetscape Project	Road diet and streetscape along North Central Street, reducing four lanes to two lanes with center turn lane	City of Knoxville	CON	2017	2022	Non-Exempt

Table D-3: FY 2017-2020 Transportation Improvement Program/Mobility Plan Project List Crosswalk

TIP ID	Mobility Plan ID	Route	Description	Lead Agency	TIP Highest Phase of Work Programmed	TIP Fiscal Year	Mobility Plan Horizon Year	Air Quality Status
17-2014-032	09-617	South Knoxville Waterfront Roadway Improvements	Construct roadway streetscape improvements and utility relocations along Sevier Ave and new roundabout at the intersection of Foggy Bottom/Seiver Ave/Island Home Ave.	City of Knoxville	CON	2017	2022	Exempt
17-2014-033	09-508	Chapman Hwy. (SR-71) Improvements	Add center turn lane	TDOT	CON	2017	2022	Non-Exempt
17-2014-034	09-410	SR-73 / US-321 at SR-2 / US-11	Intersection Improvements	TDOT	CON	2017	2022	Exempt
17-2014-035	09-257	SR 115 / US 129 (Relocated Alcoa Hwy.)	Construct new 4-lane divided highway with auxiliary lanes and new interchanges at McGhee Tyson Airport access, Wright Rd and Pellissippi Pkwy (SR-162)	TDOT	ROW	2017	2026	Non-Exempt
17-2014-037	09-616	Pleasant Ridge Rd.	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	City of Knoxville	CON	2017	2022	Exempt
17-2014-042	13-602	Traffic Control Equipment Upgrade - Knoxville	Purchase, installation and integration of signal controllers, signal monitors, closed loop equipment and software. Project also includes development of new signal timing plans for the new equipment and software	City of Knoxville	CON	2017	2022	Exempt
17-2014-044	13-863	Knox/Blount Greenway - Phase II	Construction of an off-road trail that will connect Phase I of the Knox Blount Greenway to existing pedestrian and bicycle facilities on Alcoa Highway Bridge.	Knox County	CON	2017	2022	Exempt
17-2014-047	13-1006	East Knoxville Sidewalk Improvements	Complete a sidewalk network between a high school and nearby neighborhoods along S. Castle St. Approximately 1,400 linear feet of sidewalk.	City of Knoxville	CON	2017	2022	Exempt
17-2014-058	09-632	Concord Rd.	Widen roadway to 4-lanes with median/center turn lane and new bicycle/pedestrian facilities	TDOT	CON	2017	2022	Non-Exempt
17-2014-059	09-214	Sevierville Rd.	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	TDOT	CON	2020	2022	Non-Exempt
17-2014-060	09-211	Morganton Rd. Roadway Improvement	Reconstruct 2-lane road with addition of turn lanes	Blount County	PE-N/PE-D	2017	2026	Exempt
17-2014-069	09-653	Alcoa Hwy. (SR-115 / US-129)	Widen 4-lane to 6-lane including pedestrian and bicycle facilities.	TDOT	ROW	2017	2026	Non-Exempt
17-2014-070	09-402	Lenoir City Downtown Streetscapes - Phase 2	Streetscape improvements along Hwy. 11/S.R. 2 (Broadway) between Grand Street and C Street, and B Street between 1st Avenue and Broadway Street	Lenoir City	CON	2017	2022	Exempt
17-2014-073	13-852	Knoxville South Waterfront Pedestrian/Bicycle Bridge	Construct a new pedestrian/bicycle bridge over the Tennessee River connecting the South Knoxville Waterfront redevelopment area to the University of Tennessee	City of Knoxville	PE-D	2017	2030	Exempt
17-2014-074	09-423	US-321 (SR-73) Widening	Widen from 4 to 6 lanes	TDOT	CON	2017	2022	Exempt
17-2014-076	17-411	Buttermilk Road Resurfacing	Resurface roadway	Loudon County	CON	2017	2022	Exempt

Table D-3: FY 2017-2020 Transportation Improvement Program/Mobility Plan Project List Crosswalk

TIP ID	Mobility Plan ID	Route	Description	Lead Agency	TIP Highest Phase of Work Programmed	TIP Fiscal Year	Mobility Plan Horizon Year	Air Quality Status
17-2014-077	13-808	Maryville Alcoa Advanced Traffic Management System Phase II	Upgrade signal communications and equipment along US411/US321, US129 and SR33.	Maryville	CON	2017	2022	Exempt
17-2014-078	13-1003	Chapman Highway Advanced Traffic Management System	Expand the City of Knoxville's Advanced Traffic Management System along Chapman Highway.	City of Knoxville	CON	2017	2022	Exempt
17-2014-079	17-802	City of Loudon Traffic Flow Improvement Project	Replace four signals to include vehicle detection and outfit seven intersections with signal system communication and coordination infrastructure. Provide signal timing improvements within the city.	City of Loudon	CON	2017	2022	Exempt
17-2014-080	13-1004	Liberty Street Multimodal Project	Addition of sidewalks and bicycle facilities along Liberty and Division Streets.	City of Knoxville	CON	2017	2022	Exempt
17-2014-081	13-1005	Oak Ridge Turnpike Intersection Pedestrian Safety Improvements	Pedestrian safety improvements, including marked crosswalks, ramps and pedestrian indications, at two intersections. Includes mast arm replacement, to be funded by L-STP funds.	Oak Ridge	CON	2017	2022	Exempt
17-2014-082	13-601	Union Road/N. Hobbs Road Improvements	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	Farragut	CON	2019	2022	Exempt
17-2014-083	17-401	Blair Bend Road Resurfacing	Resurface roadway	City of Loudon	CON	2017	2022	Exempt
17-2014-084	09-258	Relocated Alcoa Hwy. (SR-115 / US-129)	Construct new 4-lane divided highway with auxiliary lanes and new interchange at Singleton Station Rd	TDOT	ROW	2017	2026	Non-Exempt
17-2014-204	13-861	CAC Transit Vehicle Replacement	Purchase of demand response transit vehicles for fleet replacement	CAC	PUR	2020	2022	Exempt
17-2014-205	Consistent with Mobility Plan Goal 2	CAC Volunteer Assisted Transit Vehicle Replacement	CAC will purchase up to four para-transit vehicles each year to continue providing Demand Response transportation to the residents of Knoxville and Knox County	CAC	PUR	2017	N/A	Exempt
17-2014-207	Consistent with Mobility Plan Goal 2	Smart Trips - Comprehensive Program	Coordinator works with businesses to assist them in developing or expanding worksite commute options, programs, and other incentives.	ТРО	OPER	2017	N/A	Exempt
17-2014-225	Consistent with Mobility Plan Goal 2	Bike Parking Program	Provide convenient and secure bike parking destinations by reducing cost for businesses and agencies to provide bike parking for employees and customers.	TPO	PUR	2018	N/A	Exempt
17-2014-229	13-816	Knox County Advanced Traffic Management System - Phase 1	Cedar Bluff Rd from Sherrill Blvd to Middlebrook Pk (SR-169) (1.3 miles) and Maynardville Pk from Rifle Range Rd to E. Emory Rd (2.0 miles)	Knox County	CON	2017	2022	Exempt
17-2014-231	13-813	Farragut Traffic Signal Improvement Project	Upgrade signal communications and equipment at all signalized intersections within the Town to allow for a centrally controlled signal system	Farragut	CON	2017	2022	Exempt
17-2014-232	13-812	Lenoir City ITS: Signal System Design	The project is to design and implement ITS signal system for 20 coordinated signals along US321/SR-73 and US-11/SR-2.	Lenoir City	CON	2017	2022	Exempt

Table D-3: FY 2017-2020 Transportation Improvement Program/Mobility Plan Project List Crosswalk

TIP ID	Mobility Plan ID	Route	Description	Lead Agency	TIP Highest Phase of Work Programmed	TIP Fiscal Year	Mobility Plan Horizon Year	Air Quality Status
17-2014-301	Consistent with Mobility Plan Goal 4	Highway Safety Improvement Program (HSIP) Grouping	Any strategy, activity or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem, including workforce development, training and education activities.	TDOT	CON	2020	N/A	Exempt
17-2014-302	Consistent with Mobility Plan Goal 6	Surface Transportation Block Grant Program (STBG) Grouping	Projects and programs for the preservation and improvement of the conditions and performance of Federal-aid highways and public roads	TDOT	CON	2020	N/A	Exempt
17-2014-304	Consistent with Mobility Plan Goal 4	HELP Truck Expansion Program	To expand the existing TDOT Freeway Service Patrol Program by acquiring three new HELP trucks and three operators and by expanding routes to provide coverage and services during peak hours in the Knoxville air quality nonattainment and maintenance area.	TDOT	OPER	2017	N/A	Exempt
17-2017-001	17-604	Jackson Avenue, Bridges over ramp to Gay St.	Replacement of existing ramps from Gay Street to Jackson Avenue	City of Knoxville	CON	2017	2022	Exempt
17-2017-003	09-634	Pellissippi Pkwy/Hardin Valley Interchange	Reconfigure existing interchange to improve capacity, safety and operations. Add new northbound on-ramp in northeast quadrant.	Knox County	CON	2018	2022	Non-Exempt
17-2017-004	17-417	J. Carmichael Greer Pedestrian Bridge	Conversion of existing 2-lane vehicle bridge and approaches at Fort Loudoun Dam to a pedestrian and bicycle shared use path	Lenoir City	CON	2018	2022	Exempt
17-2017-005	17-202	US 129 Widening	Widen from 4 to 6 lanes within existing right-of-way	Maryville	PE-D/PE-N	2019	2022	Non-Exempt
17-2017-006	13-833	Maryville to Townsend Greenway - Phase 1 (Brown Creek)	Construct a new shared use path between the existing Maryville/Alcoa Greenway at Aluminum Avenue to Lamar Alexander Pkwy along Brown Creek	Maryville	CON	2020	2022	Exempt
17-2017-007	17-201	Amerine Rd Improvements	Reconstruct 2-lane road with addition of turn lanes and sidewalk	Maryville	CON	2020	2022	Exempt
17-2017-009	13-838	First Creek Greenway - Broadway Streetscape	Construct a new shared use path extending First Creek Greenway from near Cecil Ave to near Woodland Ave	City of Knoxville	CON	2018	2022	Exempt
17-2017-011	17-901	East Knox Greenway - Phase 1	Construct a new shared use path connecting First Creek Greenway to Knoxville Botanical Gardens and Arboretum	City of Knoxville	CON	2020	2022	Exempt
17-2017-015	09-689	Papermill Drive Complete Street	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	City of Knoxville	PE-D/PE-N	2020	2026	Exempt
17-2017-017	17-608	Magnolia Avenue Streetscape - Phase 3 and 4	Construct streetscape improvements in the existing right of way that include raised medians replacing center left-turn lane, signal improvements, bike lanes, improved sidewalks, bus pull-offs, and amenities	City of Knoxville	PE-D/PE-N	2019	2026	Exempt
17-2017-023	13-206	Tesla Blvd	Construct new 2-lane boulevard with bicycle/pedestrian facilities	City of Alcoa	CON	2017	2022	Non-Exempt

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TIP ID	Mobility Plan ID	Route	Description	Lead Agency	TIP Highest Phase of Work Programmed	TIP Fiscal Year	Mobility Plan Horizon Year	Air Quality Status
17-2017-024	13-813	Farragut Advanced Traffic Management System: Phase 1	Upgrade signal communications and equipment at all signalized intersections within the Town to allow for a centrally controlled signal system	Farragut	CON	2019	2022	Exempt
17-2017-025	Consistent with Mobility Plan Goal 4	Cleaner Operations Vehicles with Propane	Replace two gasoline-powered transportation trucks with Chevrolet trucks converted to propane autogas.	Anderson County	PUR	2018	N/A	Exempt
17-2017-026	Consistent with Mobility Plan Goal 4	Cleaner EMS Vehicles with Propane	Replace four gasoline-powered EMS trucks with Chevrolet trucks converted to propane autogas	Anderson County	PUR	2018	N/A	Exempt
17-2017-027	Consistent with Mobility Plan Goal 4	Advancing Highway Maintenance Vehicles with Propane	Replace 13 gasoline-powered maintenance trucks with Ford vehicles converted to propane autogas.	Anderson County	PUR	2018	N/A	Exempt
17-2017-028	17-1006	Bus Rapid Transit Bus Stops/Passenger Information Systems Install	Implementation of traffic signal and transit enhancements to create a new express BRT route along existing KAT Broadway Route 22. Features include installation of transit signal priority technology, new BRT stops equipped with passenger information systems and potential queue jump applications.	City of Knoxville	CON	2019	2022	Exempt
17-2017-029	Consistent with Mobility Plan Goal 2	Duck Pond Walking and Bike Path	Construction of a 10-foot-wide ADA-accessible shared use path and pedestrian amenities. The path is approximately 3,360 linear feet of concrete pavement and boardwalk around the Duck Pond and Springbrook Road.	City of Alcoa	CON	2017	N/A	Exempt
17-2017-200	Consistent with Mobility Plan Goal 2	Section 5307 Funds	5307 formula transit funding is for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances	City of Knoxville	PUR	2020	N/A	Exempt
17-2017-201	Consistent with Mobility Plan Goal 2	Section 5310 Funds	5310 formula transit funding is to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act complementary paratransit services	ТРО	PUR	2020	N/A	Exempt
17-2017-202	Consistent with Mobility Plan Goal 2	Section 5339 Funds	5339 formula transit funding is to provide capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities.	City of Knoxville	PUR	2020	N/A	Exempt
17-2017-203	17-1002	ETHRA Transit Vehicle Replacement Project	Purchase of demand response transit vehicles for fleet replacement	ETHRA	PUR	2020	2022	Exempt
17-2017-204	17-1007	Purchase KAT Vehicles - Fixed Route Buses	Purchase of fixed-route buses for fleet replacement or minor expansion	KAT	PUR	2019	2022	Exempt

Table D-3: FY 2017-2020 Transportation Improvement Program/Mobility Plan Project List Crosswalk

TIP ID	Mobility Plan ID	Route	Description	Lead Agency	TIP Highest Phase of Work Programmed	TIP Fiscal Year	Mobility Plan Horizon Year	Air Quality Status
17-2017-205	17-1009	KAT Implementation of ITS Technologies	Technology upgrades including improved automated vehicle location (AVL), electronic passenger information systems, onboard WiFi, automated passenger counters, mobile fare payment, bus diagnostics, safety systems, traffic management and communication systems	KAT	PUR	2018	2022	Exempt
17-2017-206	17-1008	Purchase KAT Vehicles - Fixed Route Trolley Buses	Purchase of fixed-route trolley buses for fleet replacement or minor expansion	KAT	PUR	2019	2022	Exempt
17-2017-207	17-1010	Purchase KAT Vehicles - Neighborhood Service Buses	Purchase of neighborhood service buses for fleet replacement or minor expansion	KAT	PUR	2019	2022	Exempt
17-2017-208	17-1005	KAT Purchase of ADA Paratransit Vans	Purchase of ADA Paratransit Vans for fleet replacement or minor expansion	KAT	PUR	2019	2022	Exempt
17-2017-209	Consistent with Mobility Plan Goal 2	Smart Trips - Ridesharing Program	Continuation of Smart Trips program that encourages alternatives to driving alone through an online ridematching and logging database, incentives, marketing and outreach.	TPO	OPER	2020	N/A	Exempt
17-2017-303	Consistent with Mobility Plan Goal 6	National Highway Performance Program (NHPP) Grouping	Projects for the preservation and improvement of the conditions and performance of the National Highway System (NHS)	TDOT	CON	2020	N/A	Exempt
17-2017-304	Consistent with Mobility Plan Goal 6	PHSIP Grouping	Any strategy, activity or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem, including workforce development, training and education activities.	TDOT	CON	2020	N/A	Exempt
17-2017-305	13-830	Oak Ridge Rails to Trails (Transportation Alternatives Grouping)	Construct new shared use "rails-to-trails" path along an abandoned rail line through the City of Oak Ridge.	Oak Ridge	ROW	2017	2026	Exempt
17-2017-306	17-601	Asheville Hwy/Magnolia Ave/Rutledge Pk Intersection Study (Planning and Studies Grouping)	Conduct a planning study to investigate multimodal improvement options at this location	City of Knoxville	PLN	2018	2022	Exempt
17-2017-306	17-609	Safer and Complete Streets Study (Planning and Studies Grouping)	Conduct a planning study to identify and prioritize projects to correct safety deficiencies on non-state maintained federal aid routes in the City of Knoxville	City of Knoxville	PLN	2019	2022	Exempt
17-2017-306	17-603	Chapman Hwy Planning Study (Planning and Studies Grouping)	Conduct study to develop prioritized project list by integrating existing plans.	City of Knoxville	PLN	207	2022	Exempt
17-2017-306	17-605	Knoxville Center Mall Area Circulation Study (Planning and Studies Grouping)	Conduct a planning study of the Knoxville Center and I-640 Interchange and frontage roads including a feasibility study to add a new exit from I-640	City of Knoxville	PLN	2019	2022	Exempt
17-2017-306	17-909	Sidewalk Strategic Study (Planning and Studies Grouping)	Conduct a planning study to determine and prioritize sidewalk needs in City of Knoxville.	City of Knoxville	PLN	2017	2022	Exempt
17-2017-306	Consistent with Mobility Plan Goal 2	Knox County Greenway Study (Planning and Studies Grouping)	Detailed Knox County greenway study for major corridors within the county.	Knox County	PLN	2019	N/A	Exempt

Table D-3: FY 2017-2020 Transportation Improvement Program/Mobility Plan Project List Crosswalk

TIP ID	Mobility Plan ID	Route	Description	Lead Agency	TIP Highest Phase of Work Programmed	TIP Fiscal Year	Mobility Plan Horizon Year	Air Quality Status
17-2017-307	17-404	Highland Avenue Resurfacing & Sidewalk Project (Maintenance and Repair Grouping)	Resurface roadway and improve sidewalks	City of Loudon	CON	2019	2022	Exempt
17-2017-307	Consistent with Mobility Plan Goal 1	Loudon Resurfacing (Maintenance and Repair Grouping)	Resurface roadways within Loudon County	Loudon County	CON	2017	N/A	Exempt
17-2017-308	17-911	Tyson Fort Sanders Bike Connection (Bike and Pedestrian Grouping)	Construct new shared use path between Fort Sanders Neighborhood and Tyson Park	City of Knoxville	PE-D/PE-N	2019	2022	Exempt
17-2017-308	17-850	South Waterfront Greenway - East of Suttree (Bike and Pedestrian Grouping)	Construct a new shared use path along the Tennessee River connecting South Waterfront Greenway to Will Skelton Greenway and across the river to James White Greenway/Neyland Greenway/Morningside Greenway	City of Knoxville	PE-D/PE-N	2020	2026	Exempt
17-2017-308	13-880	Atlantic Avenue Sidewalk (Bike and Pedestrian Grouping)	Construct 3,000 linear feet of sidewalks on Atlantic Ave between Pershing St and Broadway	City of Knoxville	CON	2018	2022	Exempt
17-2017-308	17-910	Tazewell Pike Sidewalk (Bike and Pedestrian Grouping)	Construct sidewalk along Tazewell Pike from Old Broadway to Jacksboro Pike	City of Knoxville	CON	2020	2022	Exempt
17-2017-030	09-605	Schaad Rd Extension	Construct new 4-lane roadway with sidewalks	Knox County	CON	2017	2022	Non-Exempt
17-2017-031	09-238	Robert C. Jackson Drive Extension	Construct new 2-lane roadway with sidewalks	Maryville	CON	2017	2022	Non-Exempt
17-2017-201	Consistent with Mobility Plan Goal 2	KAT Rides to Wellness Demonstration and Innovative Coordinated Access and Mobility Grant (Section 5310 Grouping)	Rides to Wellness Demonstration and Innovative Coordinated Access and Mobility (R2W) Grant awarded to KAT. This grant will fund a consortium that includes stakeholders and consumers from the transportation, healthcare and human service sectors.	КАТ	OPER	2017	N/A	Exempt
17-2017-305	Consistent with Mobility Plan Goal 2	Alcoa Sidewalk/Greenway Extension (Transportation Alternatives Grouping)		Alcoa	CON	2017	N/A	Exempt
17-2017-305	Consistent with Mobility Plan Goal 2	First Creek Greenway-Edgewood Park and Environs (Transportation Alternatives Grouping)	A greenway trail from the intersection of North Broadway and Woodland Ave to Edgewood Park.	City of Knoxville	CON	2018	N/A	Exempt
17-2017-305	Consistent with Mobility Plan Goal 2	Second Creek Greenway (Transportation Alternatives Grouping)	Construct pedestrian and bicycles facilities from World's Fair Park to Gay St, along Jackson Ave.	City of Knoxville	CON	2018	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	Loudon County Hwy Dept (PM 2.5 Grouping)	9 Total Diesel Vehicle Replacements	Loudon County	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	First Utility District of Knox County (PM 2.5 Grouping)	3 Total Diesel Vehicle Replacements	Knox County	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	Lenoir City Utilities Board (PM 2.5 Grouping)	12 Total Diesel Vehicle Replacements	Lenoir City	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	Knoxville Area Transit (PM 2.5 Grouping)	5 Total Diesel Vehicle Replacements	КАТ	PUR	2017	N/A	Exempt

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TIP ID	Mobility Plan ID	Route	Description	Lead Agency	TIP Highest Phase of Work Programmed	TIP Fiscal Year	Mobility Plan Horizon Year	Air Quality Status
17-2014-300	Consistent with Mobility Plan Goal 4	City of Lenoir City (PM 2.5 Grouping)	7 Total Diesel Vehicle Replacements	Lenoir City	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	Anderson County EMS (PM 2.5 Grouping)	2 Total Diesel Vehicle Replacements	Anderson County	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	Anderson County Hwy Dept (PM 2.5 Grouping)	9 Total Diesel Vehicle Replacements	Anderson County	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	City of Loudon (PM 2.5 Grouping)	13 Total Diesel Vehicle Replacements	City of Loudon	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	Knoxville Utilities Board (PM 2.5 Grouping)	3 Total Diesel Vehicle Replacements	KUB	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	City of Knoxville (PM 2.5 Grouping)	5 Total Diesel Vehicle Replacements	City of Knoxville	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	Powell-Clinch Utility District (PM 2.5 Grouping)	2 Total Diesel Vehicle Replacements	Powell- Clinch Utility District	PUR	2017	N/A	Exempt
17-2014-300	Consistent with Mobility Plan Goal 4	West Knox Utility District (PM 2.5 Grouping)	1 Total Diesel Vehicle Replacements	West Knox Utility District	PUR	2017	N/A	Exempt

Appendix E: TDOT Grouping Definitions

Statewide Grouping Descriptions

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

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

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

Grouping Category	Function of Grouping Activities	Allowable Work Types
Highway Safety Improvement	Any strategy, activity or project on a public road that is consistent with the	 Intersection safety improvements Pavement and shoulder widening (including a passing lane to remedy an unsafe condition)
Program(HSIP) Grouping	data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety	 Installation of rumble strips or another warning devices, if they do not adversely affect the safety or mobility of bicyclists and pedestrians Installation of skid-resistant surface at intersections or locations with high crash frequencies
Knox MPO STIP # 1747130 TIP # 17-2017-301	problem, including workforce development, training and education activities. Eligibility of specific projects, strategies, and activities is generally based on: Consistency with SHSP, Crash experience, crash potential, or other data-supported means, Compliance with the requirements of Title 23 of the USC, and State's strategic or	 Improvements for pedestrian or bicyclist safety Construction and improvement of a railway-highway grade crossing safety feature, including installation of protective devices The conduct of a model traffic enforcement activity at a railway-highway crossing Construction of a traffic calming feature Elimination of a roadside hazard Installation, replacement, and other improvements of highway signage and pavement markings, or a project to maintain minimum levels of retro-reflectivity that addressesa highway safety problem consistent with the SHSP Installation of emergency vehicle priority control systems at signalized intersections Installation of traffic control or other warning devices at locations with high crash potential Transportation safety planning Collection, analysis, and improvement of safety data Planning integrated interoperable emergency communications equipment or operational or traffic enforcement activities (including police assistance) related to work zone safety Installation or retrofitting of structures or other measures to eliminate or reduce crashes involving vehicles and wildlife
	 State's strategic or performance-based safety goals to reduce fatalities and serious injuries on all public roads. Projects to upgrade railway-highway grade crossings by eliminating hazards and installing protective devices. 	 The addition or retrofitting of structures or other measures to eliminate or reduce crashes involving vehicles and wildlife Installation of yellow-green signs and signals at pedestrian and bicycle crossings and in school zones Construction and operational improvements on high risk rural roads Geometric improvements to a road for safety purposes that improve safety Road safety audits Roadway safety infrastructure improvements consistent with FHWA's "HighwayDesign Handbook for Older Drivers and Pedestrians" (FHWA-RD-01-103) Truck parking facilities eligible for funding under Section 1401 of MAP-21 Systemic safety improvements Installation of vehicle-to-infrastructure communication equipment. Pedestrian hybrid beacons. Roadway improvements that provide separation between pedestrians and motor vehicles, including medians and pedestrian crossing islands. Other physical infrastructure projects not specifically enumerated in the list of eligible projects. Workforce development, training, and education activities

Grouping Category	Function of Grouping Activities	Allowable Work Types
Highway Safety Improvement Program(HSIP) Grouping (continued) Knox MPO		Activities included as part of the Highway Railroad Grade Crossing program: Elimination of hazards of railway-highway crossings, including the separation or protection of grades at crossings Reconstruction of existing railroad grade crossing structures Relocation of highways to eliminate grade crossings Installation of protective devices
STIP # 1747130 TIP # 17-2017-301		



Grouping Category	Function of Grouping Activities	Allowable Work Types
National Highway Performance Program (NHPP) Grouping Knox MPO STIP # 1747100 TIP # 17-2017-303	Projects for the preservation and improvement of the conditions and performance of the National Highway System (NHS), including Rehabilitation, resurfacing, restoration, preservation, and operational improvements, Traffic operations, Bridge and tunnel improvements, Safety improvements, Bicycle and pedestrian improvements, and Environmental mitigation.	Minor rehabilitation, pavement resurfacing, preventative maintenance, restoration, and pavement preservation treatments to extend the service life of highwayinfrastructure, including pavement markings and improvements to roadside hardware or sight distance Highway improvement work including slide repair, rock fall mitigation, drainage repairs, or other preventative work necessary to maintain or extend the service life of the existing infrastructure in a good operational condition Minor operational and safety improvements to intersections and interchanges such as adding turn lanes, addressing existing geometric deficiencies, and extending on/off ramps Capital and operating costs for intelligent transportation systems (ITS) and traffic monitoring, management, and control facilities and programs: □ Infrastructure-based intelligent transportation systems (ITS) capital improvements □ Traffic Management Center (TMC) operations and utilities □ Freeway service patrols □ Traveler information Bridge and tunnel construction (no additional travel lanes), replacement, rehabilitation, preservation, protection, inspection, evaluation, and inspector training and inspection and evaluation of other infrastructure assets, such as signs, walls, and drainage structures □ Development and implementation of a State Asset Management Plan including data collection, maintenance and integration, software costs, and equipment costs that support the development of performance-based management systems for infrastructure Rail-highway grade crossing improvements Highway safety improvements □ Installation of rew or improvement of existing guardrail □ Installation of traffic signs and signals/lights □ Spot safety improvements Pedestrian and/or bicycle facilities Traffic calming and traffic diversion improvements Noise walls Wetland and/or stream mitigation Environmental restoration and pollution abatement Control of noxious weeds and establishment of native species

Grouping Category	Function of Grouping Activities	Allowable Work Types
		Activities previously authorized under the Surface Transportation Program (STP): Minor rehabilitation, pavement resurfacing, preventative maintenance, restoration, and pavement preservation treatments to extend the service life of highwayinfrastructure, including pavement markings and improvements to roadside hardware or sightdistance. Highway improvement work including sidie repair, rock fall mitigation, drianage repairs, or other preventative work necessary to maintain or extend the service life of the existing infrastructure in a good operational condition. Minor operational and safety improvements to intersections and interchanges such as adding turn lanes, addressing existing geometric deficiencies, and extending on/off ramps. Capital and operating costs for intelligent transportation systems (ITS) and traffic monitoring, management, and control facilities and programs: Infrastructure-based intelligent transportation systems (ITS) and traffic monitoring, management, and control facilities and programs: Traffic Management Center (TMC) operations and utilities Traffic Management Center (TMC) operations and utilities Traveler information Bridge and tunnel construction (no additional travel lanes), replacement, rehabilitation, preservation, protection, inspection, evaluation, and inspector training and inspection and evaluation of other infrastructure assets, such as signs, walls, and drainage structures Development and implementation of a State Asset Management Plan including data collection, maintenance and integration, software costs, and equipment costs thatsupport the development of performance-based management systems for infrastructure Rail-highway grade crossing improvements Highway safety improvements: Installation of ruffic signs and signals/lights Sidewalk improvements Pedestrian and/or bicycle facilities Traffic calming and traffic diversion improvements Transportation Alternatives as defined by 23 USC 213(B), 23 USC. 101(A)(29), and Section 1122 of MAP-21 Noise walls Wetiand and/o
		 Environmental restoration and pollution abatement Control of noxious weeds and establishment of native species Activities previously authorized under the Transportation Enhancement Program:



Surface Transportation Block Grant Program (STBG) Grouping

(continued)

Knox MPO STIP# 1747105 TIP# 17-2017-302

- Historic preservation,
- On- and off-road pedestrian and bicycle facilities,
- Infrastructure projects for improving non-driver access to public transportation and enhanced mobility,
- Community improvement activities,
- Recreational Trail Program projects,
- Safe Routes to School (SRTS) projects,
- Transportation Enhancement projects,
- **Transportation Alternatives** projects,
- Projects for the creation, rehabilitation, and maintenance of multi-use recreational trails.

- 0 Pedestrian and bicycle facilities, safety, and educational activities
- Acquisition of scenic easements and scenic or historic sites 0
- 0 Scenic or historic highway programs
- 0 Landscaping and other scenic beautification activities
- Historic preservation 0
- 0 Rehabilitation and operation of historic transportation buildings, structures, or facilities
- 0 Preservation of abandoned railway corridors
- 0 Inventory, control, and removal of outdoor advertising
- Archaeological planning and research 0
- Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity
- Establishment of transportation museums
- Activities under the Tennessee Roadscapes grant program, including landscaping, irrigation, benches, trash cans, paths, and 0

Activities previously authorized under the Safe Routes to School Program (SRTS):

- Sidewalk improvements
- Traffic calming and speed reduction improvements
- Pedestrian and bicycle crossing improvements
- On-street bicycle facilities
- Off-street bicycle and pedestrian facilities
- Secure bicycle parking facilities
- Traffic diversion improvements approximately within 2 miles of a school location
- Non-infrastructure related activities:
 - Public awareness campaigns and outreach to press and community leaders
 - Traffic education and enforcement in the vicinity of schools
 - Student sessions on bicycle and pedestrian safety, health, and environment
 - Funding for training, volunteers, and managers of safe routes to school program

Activities previously authorized under the Transportation Alternatives Program (TAP):

- Construction, planning, and design of on-road and off-road trail facilities forpedestrians, bicyclists, and other non-motorized forms of transportation, including:
 - 0 Sidewalk improvements
 - Bicycle infrastructure
 - 0 Pedestrian and bicycle signals
 - Traffic calming techniques 0
 - Lighting and other safety-related infrastructure



Surface Transportation Block Grant Program (STBG) Grouping

(continued)

Knox MPO STIP# 1747105 TIP# 17-2017-302 Projects for the planning, design or construction of boulevards and other roadways largely in the rightof-way of former Interstate System routes or other divided highways.

- Transportation projects to achieve compliance with the Americans with Disabilities Act of 1990
- Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs
- Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation
- Construction of turnouts, overlooks, and viewing areas
- Community improvement activities, which include but are not limited to:
 - Inventory, control, or removal of outdoor advertising
 - Historic preservation and rehabilitation of historic transportation facilities
 - Vegetation management in transportation rights-of-way to improve roadwaysafety, prevent invasive species, and provide erosion control
 - Archaeological activities relating to impacts from implementation of atransportation project eligible under Title 23 of
- Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to:
 - Address stormwater management, control, and water pollution preventionor abatement related to highway construction or due to highway runoff
 - Reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats
- Recreational Trails Program activities under 23 USC 206
- SRTS Program infrastructure-related projects, non-infrastructure-related activities (such as pedestrian and bicycle safety and educational activities advanced under the SRTS program), and SRTS Coordinator positions.
- Planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways

Activities previously authorized under the Recreational Trails Program (RTP):

- Maintenance and restoration of existing recreational trails
- Development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails
- Purchase and lease of recreational trail construction and maintenance equipment
- Construction of new recreational trails
- Acquisition of easements and fee simple title to property for recreational trails or recreational trail corridors
- Assessment of trail conditions for accessibility and maintenance
- Development and dissemination of publications and operation of educational programs to promote safety and environmental protection
- Payment of costs to the State incurred in administering the program

Highway Safety Improvement Program(HSIP) Grouping Any strategy, activity or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem, including workforce development, training and education activities. Knox MPO STIP # 1747130 TIP # 17-2017-301 Any strategy, activity or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem, including workforce development, training and education activities. Intersection safety improvements Pavement and shoulder widening (including a passing lane to remedy an unsafecondition) Installation of rumble strips or another warning devices, if they do not adversely affect the safety or mobility and pedestrians Installation of skid-resistant surface at intersections or locations with high crash frequencies Improvements for pedestrian or bicyclist safety Construction and improvement of a railway-highway grade crossing safety feature, including installation of a traffic calming feature Elimination of a traffic calming feature Elimination of a roadside hazard Installation, replacement, and other improvements of highway signage and pavement markings, or a	•
Installation, replacement, and other improvements of highway signage and pavement markings, or a maintain minimum levels of retor-reflectivity that addresses highway safety problem consistent with the S Installation of emergency vehicle priority control systems at signalized intersections Installation of traffic control or other warning devices at locations with high crash potential transportation safety planning Compliance with the requirements of Title 23 of the USC, and State's strategic or performance-based safety goals to reduce fatalities and serious injuries on all public roads. Projects to upgrade railway-highway grade crossings by eliminating hazards and installing protective devices. Projects to upgrade railway-highway grade crossings and installation of vehicle-to-infrastructure improvements to high risk rural roads (Geometric improvements to a road for safety purposes that improve safety Pedestrians" (IFHWA-RD-01-103) Truck parking facilities eligible for funding under Section 1401 of MAP-21 (Systemic safety) improvements that provide separation between pedestrians and motor vehicles, including media crossing islands. Other physical infrastructure projects not specifically enumerated in the list of eligible projects.	afety feature, including installation of protective devices way crossing nage and pavement markings, or a project to y safety problem consistent with the SHSP d intersections h high crash potential ment or operational or traffic enforcement activities action work zones and traffic lanes), and crash ate or reduce crashes involving vehicles and wildlife e crossings and in school zones safety "HighwayDesign Handbook for Older Drivers and 2-21 s and motor vehicles, including medians and pedestrian

Grouping Category	Function of Grouping Activities	Allowable Work Types
Highway Safety Improvement Program(HSIP) Grouping		Activities included as part of the Highway Railroad Grade Crossing program: Elimination of hazards of railway-highway crossings, including the separation or protection of grades at crossings Reconstruction of existing railroad grade crossing structures Relocation of highways to eliminate grade crossings
(continued) Knox MPO STIP # 1747130 TIP # 17-2017-301		 Installation of protective devices Projects authorized from this grouping may be authorized with a different Federal percentage than shown in the grid based on one or more of the following: 90% for certain Interstate projects under 23 U.S.C. 120(a); 100% for certain safety items under 23 U.S.C. 120(c); or 100% for Appalachian Development Highway System (ADHS) projects under MAP-21 §1528 and 40 U.S.C. 14501.



Grouping Category	Function of Grouping Activities	Allowable Work Types
National Highway Performance	Projects for the preservation and improvement of the conditions and performance of the National	 Minor rehabilitation, pavement resurfacing, preventative maintenance, restoration, and pavement preservation treatments to extend the service life of highwayinfrastructure, including pavement markings and improvements to roadside hardware or sight distance
Program (NHPP) Grouping	Highway System (NHS), including	 Highway improvement work including slide repair, rock fall mitigation, drainage repairs, or other preventative work necessary to maintain or extend the service life of theexisting infrastructure in a good operational condition
	Rehabilitation, resurfacing, restoration, preservation, and	 Minor operational and safety improvements to intersections and interchanges such as adding turn lanes, addressing existing geometric deficiencies, and extending on/offramps
Knox MPO STIP #	operational improvements,	Capital and operating costs for intelligent transportation systems (ITS) and traffic monitoring, management, and control facilities and programs:
	Traffic operations,	O Infrastructure-based intelligent transportation systems (ITS) capital improvements
1747100	·	O Traffic Management Center (TMC) operations and utilities
TIP#	Bridge and tunnel	O Freeway service patrols
17-2017-303	improvements,	O Traveler information
	Safety improvements,	 Bridge and tunnel construction (no additional travel lanes), replacement, rehabilitation, preservation, protection, inspection, evaluation, and inspector training and inspection and evaluation of other infrastructure assets, such as signs, walls, and drainage structures
	Bicycle and pedestrian improvements, and	 Development and implementation of a State Asset Management Plan including data collection, maintenance and integration, software costs, and equipment costs that support the development of performance-based management systems for infrastructure
	Environmental mitigation.	Rail-highway grade crossing improvements
	Environmental mitigation.	Highway safety improvements:
		O Installation of new or improvement of existing guardrail
		O Installation of traffic signs and signals/lights
		O Spot safety improvements
		Sidewalk improvements
		Pedestrian and/or bicycle facilities
		Traffic calming and traffic diversion improvements
		Noise walls
		Wetland and/or stream mitigation
		Environmental restoration and pollution abatement
		Control of noxious weeds and establishment of native species
		Projects authorized from this grouping may be authorized with a different Federal percentage than
		shown in the grid based on one or more of the following:
		o 90% for certain Interstate projects under 23 U.S.C. 120(a);
		o 100% for certain interstate projects under <u>23 U.S.C. 120(c)</u> ; or
		o 100% for Appalachian Development Highway System (ADHS) projects under MAP-21 §1528

dinor rehabilitation, pavement resurfacing, preventative maintenance, restoration, and pavement preservation treatments to extend the service life of highwayinfrastructure, including pavement markings and improvements to roadside hardware or sight distance. Highway improvement work including slide repair, rock fall mitigation, drainage repairs, or other preventative work necessary to maintain or extend the service life of theexisting infrastructure in a good operational condition. Minor operational and safety improvements to intersections and interchanges such as adding turn lanes, addressing existing geometric deficiencies, and extending on/off ramps. Capital and operating costs for intelligent transportation systems (ITS) and traffic monitoring, management, and control acilities and programs: O Infrastructure-based intelligent transportation systems (ITS) capital improvements O Traffic Management Center (TMC) operations and utilities O Freeway service patrols O Traveler information
Installation of traffic signs and signals/lights Spot safety improvements Installation of traffic signs and signals/lights Spot safety improvements Sidewalk

Surface **Transportation Block Grant** Program (STBG) Grouping

(continued)

Knox MPO STIP# 1747105 TIP# 17-2017-302

- Historic preservation,
- On- and off-road pedestrian and bicycle facilities,
- Infrastructure projects for improving non-driver access to public transportation and enhanced mobility,
- Community improvement activities,
- Recreational Trail Program projects,
- Safe Routes to School (SRTS) projects,
- Transportation Enhancement projects,
- **Transportation Alternatives** projects,
- Projects for the creation, rehabilitation, and maintenance of multi-use recreational trails.

- 0 Pedestrian and bicycle facilities, safety, and educational activities
- Acquisition of scenic easements and scenic or historic sites 0
- 0 Scenic or historic highway programs
- 0 Landscaping and other scenic beautification activities
- 0 Historic preservation
- 0 Rehabilitation and operation of historic transportation buildings, structures, or facilities
- 0 Preservation of abandoned railway corridors
- 0 Inventory, control, and removal of outdoor advertising
- 0 Archaeological planning and research
- Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity
- Establishment of transportation museums
- Activities under the Tennessee Roadscapes grant program, including landscaping, irrigation, benches, trash cans, paths and signage

Activities previously authorized under the Safe Routes to School Program (SRTS):

- Sidewalk improvements
- Traffic calming and speed reduction improvements
- Pedestrian and bicycle crossing improvements
- On-street bicycle facilities
- Off-street bicycle and pedestrian facilities
- Secure bicycle parking facilities
- Traffic diversion improvements approximately within 2 miles of a school location
- Non-infrastructure related activities:
 - Public awareness campaigns and outreach to press and community leaders
 - Traffic education and enforcement in the vicinity of schools
 - Student sessions on bicycle and pedestrian safety, health, and environment
 - Funding for training, volunteers, and managers of safe routes to school program

Activities previously authorized under the Transportation Alternatives Program (TAP):

- Construction, planning, and design of on-road and off-road trail facilities forpedestrians, bicyclists, and other nonmotorized forms of transportation, including:
 - 0 Sidewalk improvements
 - Bicycle infrastructure
 - 0 Pedestrian and bicycle signals
 - Traffic calming techniques 0
 - Lighting and other safety-related infrastructure 0



Surface Transportation Block Grant Program (STBG) Grouping

(continued)

Knox MPO STIP# 1747105 TIP# 17-2017-302

Projects for the planning, design or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.

- Transportation projects to achieve compliance with the Americans with Disabilities Act of 1990
- Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for nondrivers, including children, older adults, and individuals with disabilities to access daily needs
- Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users
- Construction of turnouts, overlooks, and viewing areas
- Community improvement activities, which include but are not limited to:
 - 0 Inventory, control, or removal of outdoor advertising
 - Historic preservation and rehabilitation of historic transportation facilities
 - Vegetation management in transportation rights-of-way to improve roadwaysafety, prevent invasive species, and provide erosion control
 - Archaeological activities relating to impacts from implementation of atransportation project eligible under Title 23 of the USC
- Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to:
 - Address stormwater management, control, and water pollution preventionor abatement related to highway construction or due to highway runoff
 - Reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats
- Recreational Trails Program activities under 23 USC 206
- SRTS Program infrastructure-related projects, non-infrastructure-related activities (such as pedestrian and bicycle safety and educational activities advanced under the SRTS program), and SRTS Coordinator positions.
- Planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways

Activities previously authorized under the Recreational Trails Program (RTP):

- Maintenance and restoration of existing recreational trails
- Development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails
- Purchase and lease of recreational trail construction and maintenance equipment
- Construction of new recreational trails
- Acquisition of easements and fee simple title to property for recreational trails or recreational trail corridors
- Assessment of trail conditions for accessibility and maintenance
- Development and dissemination of publications and operation of educational programs to promote safety and environmental protection
- Payment of costs to the State incurred in administering the program
- Projects authorized from this grouping may be authorized with a different Federal percentage than shown in the grid based on one or more of the following:
 - o 90% for certain Interstate projects under 23 U.S.C. 120(a);
 - o 100% for certain safety items under 23 U.S.C. 120(c); or
 - o 100% for Appalachian Development Highway System (ADHS) projects under MAP-21 §1528
 - and 40 U.S.C. 14501.



Appendix F:
Transportation
Alternatives Call for
Projects Application





PLEASE NOTE: IF YOU HAVE SUBMITTED THIS PROJECT IN 2016 FOR THE MOBILITY PLAN UPDATE, YOU DO NOT NEED TO SUBMIT AN APPLICATION FOR TA FUNDING.

SIMPLY INFORM THE TPO BY JULY 13 THAT YOU WOULD LIKE THE PROJECT CONSIDERED FOR TA FUNDING.

TA FUNDING APPLICATION FORM TRANSPORTATION ALTERNATIVES SET-ASIDE							
DDOLECT/DDOCDARANIANAE.							
PROJECT/PROGRAM NAME:							
LEAD AGENCY (See Attachment B for eligible sponsors):							
☐ New Project/Program ☐ Ex	isting Project - If Existing, Enter :	2013 RMP ID# Here:					
COUNTIES/MUNICIPALITIES:							
PROJECT TERMINI	FROM:	LENGTH:					
(If Applicable):	TO:						
GENERAL DESCRIPTION:							
DUAGE COMPLETED (CELECT ALL							
PHASES COMPLETED (SELECT ALI	L THAT APPLY):						
Design		II ROW Acquired					
NEPA Documents Approved		ortion of Construction					
Partial ROW Acquired		ther:					
PRIMARY PROJECT/PROGRAM P	URPOSE (SELECT ONE):						
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	o oo (oo. o).						
For a complete description of the pr	ojects and programs	Construction of Bike/Ped Facilities					
eligible for TA funding, see Attachm		Safe Routes to School					
FHWA's Transportation Alternatives	-	Construction of Turnouts					
guidance document is available here		Community Improvement ActivitiesEnvironmental Mitigation					
www.fhwa.dot.gov/environment/t Please note that the TPO scoring crit	<u> </u>	Highway to Boulevard Conversions					
Construction of Bike/Ped Facilities a		Trigriway to bodicvara conversions					
applications higher than other potential uses of TA funds.							
	/CELECT ALL THAT ADDIV						
PROJECT/PROGRAM ELEMENTS	(SELECT ALL THAT APPLY):						
Sidewalks	On-Street Bio	cycle Facility (Bike Lane or Shared Lane)					
Curb Ramps		rail Construction					
Crosswalk Markings	=	ail Amenities					
	☐ Signalization/Traffic Control ☐ Safe Routes to School Programming (Education,						
Wayfinding/Signs Enforcement, Encouragement, Evaluation)							
Transit Stops & Amenities	Bicycle Parki	•					
Intersection Safety	☐ Pedestrian Amenities ☐ Refuge Islands ☐ Other						
intersection salety							

PROJECT/PROGRAM NAME:	

LAND USES WITH ¼ MILE OF FA	•	oject/Program in an						
Below, check boxes at left to indicate if the	se land uses are	present within ¼	Existing Plan?	(Check all that apply)				
mile of your proposed project. Public Park Pres No Some Greenway Plan Pike (Pod Plan								
Public Park	_	d Plan						
School	No Some	Other Plan:						
Library	No Some							
Transit Stop	No Some							
Retail	Yes	No Some						
Employment	No Some							
Residential								
Other	Yes	No Some						
Check "Yes, No, or Some" at right to ind bike/ped connection between your prop "Some," please expand on the Notes pa	osed facility and ge.							
•		FISCAL	AMOUNT	MATCH				
Source of Project Cost Estimate: Rough Planning Estimate		YEAR	REQUESTED	(at least 20%)				
Detailed Planning Report		2017	\$	\$				
Preliminary Design & Engine Other	_	2018	\$	\$				
Are Matching Funds Available?	2019	\$	\$					
YES, Funds are locally programmed YES, Funds will be locally programmed		TOTAL	\$	\$				
☐ NO ☐ NOT SURE								
ABOUT YOU								
Name:		E-mail:						
Title:		Phone:						
Department:								
Agency / Organization:								
ATTACHMENTS								
Please include ALL relevant attach Budget Worksheet (see Appe			•	g: 				
Map of Project (If Applicable)	_						
NEPA Approval Letter (If App								

Λ	DD	ITI	IAI	NIC	TFS
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7.551110117.121101123						
Please use this section to expand on any answers throughout the application where you feel additional information would clarify your proposed project/program.						
Please note which section(s) of the application your notes are expanding upon. Use additional pages as needed.						

INSTRUCTIONS

By checking this box, your agency/organization is agreeing to the following stipulations should you receive TA or other federal transportation funding for this project:

- Once selections are awarded, the federal authorization of funding for a project must be obtained within two (2) years of the award date and all construction activities must be completed within four (4) years of the award date. For non-infrastructure programs, federal authorization of funding must be obtained within one (1) year of the award date, and all activities must be completed within four (4) years of the award date.
- Cost overruns are the responsibility of the local agency/organization.
- Any facility constructed with federal transportation dollars must be maintained by the local government and must be open to the public for at least 25 years.

Please submit this application along with Attachment A and any additional supporting materials to the Knoxville Regional TPO.

ATTN: Ellen Zavisca

By e-mail: ellen.zavisca@knoxtrans.org

By mail: City County Building, Suite 403 | 400 W. Main St. | Knoxville, TN 37902

By fax: (865) 215-2068

This form can be found online at: www.knoxtrans.org

DEADLINE: July 13, 2016, 5 p.m.

Attachment A

BUDGET WORKSHEET

TRANSPORTATION ALTERNATIVES SET-ASIDE

Fiscal year (select one)	Brief Description of Phase/Task/Activity	Requested Funding	Local Match (at least 20%)	Other Funding	Describe Source of Other Funding (if applicable)	Total Funding
□ 2017						
□ 2018						
□ 2019						
□ 2017						
□ 2018						
□ 2019						
□ 2017						
□ 2018						
□ 2019						
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□ 2019						
<u></u>						
□ 2018						
□ 2019						
	totals					

Attachment B

Excerpts from FHWA's Transportation Alternatives Set-Aside Implementation Guidance (find a link to the complete guidance document here: www.fhwa.dot.gov/environment/transportation_alternatives)

ELIGIBLE ENTITIES

Under 23 U.S.C. 133(h)(4)(B), the entities eligible to receive TA Set-Aside funds are:

- 1. a local government: Local government entities include any unit of local government below a State government agency, except for an MPO. Examples include city, town, township, village, borough, parish, or county agencies.
- 2. a regional transportation authority: Regional transportation authorities are considered the same as the Regional Transportation Planning Organizations defined in the statewide planning section (23 U.S.C. 135(m)).
- 3. a transit agency: Transit agencies include any agency responsible for public transportation that is eligible for funds as determined by the Federal Transit Administration.
- 4. a natural resource or public land agency: Natural resource or public land agencies include any Federal, Tribal, State, or local agency responsible for natural resources or public land administration. Examples include:
 - State or local park or forest agencies;
 - State or local fish and game or wildlife agencies;
 - Department of the Interior Land Management Agencies; and
 - U.S. Forest Service.
- 5. a school district, local education agency, or school: School districts, local education agencies, or schools may include any public or nonprofit private school. Projects should benefit the general public and not only a private entity.
- 6. a tribal government.
- 7. a nonprofit entity responsible for the administration of local transportation safety programs: Examples include a nonprofit entity responsible for:
 - a local program implementing construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs; and
 - o a safe routes to school program.
- 8. any other local or regional governmental entity with responsibility for, or oversight of, transportation or recreational trails (other than an MPO or a State agency) that the State determines to be eligible, consistent with the goals of this subsection.

State DOTs and MPOs are not eligible entities as defined under 23 U.S.C. 133(h)(4)(B) and therefore are not eligible project sponsors for TA Set-Aside funds. However, State DOTs and MPOs may partner with an eligible entity project sponsor to carry out a project.

Nonprofit organizations are not eligible as direct grant subrecipients for TA Set-Aside funds unless they qualify through one of the eligible entity categories (e.g., where a nonprofit organization is a designated transit agency, school, or an entity responsible for the administration of local transportation safety programs). Nonprofit entities are eligible to partner with any eligible entity on an eligible project, if State or local requirements permit.

ELIGIBLE PROJECTS

TA Set-Aside funds may be obligated for projects or activities described in 23 U.S.C. 101(a)(29) or 213, as such provisions were in effect on the day before the date of enactment of the FAST Act. See <u>TAP Eligible Projects</u> Legislation as in effect prior to enactment of the FAST Act.

Former 23 U.S.C. 213(b)(1):

- 1. Transportation Alternatives as defined in section 101 [former 23 U.S.C. 101(a)(29)]:

 The term "transportation alternatives" means any of the following activities when carried out as part of any program or project authorized or funded under this title, or as an independent program or project related to surface transportation:
 - A. Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.).
 - B. Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.
 - C. Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other nonmotorized transportation users.
 - D. Construction of turnouts, overlooks, and viewing areas.
 - E. Community improvement activities, which include but are not limited to:
 - i. inventory, control, or removal of outdoor advertising;
 - ii. historic preservation and rehabilitation of historic transportation facilities;
 - iii. vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control; and
 - iv. archaeological activities relating to impacts from implementation of a transportation project eligible under title 23.
 - F. Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to:
 - address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff, including activities described in sections 23 U.S.C. 133(b)(3) [as amended under the FAST Act], 328(a), and 329 of title 23; or
 - ii. (ii) reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats (Former 23 U.S.C. 213(b)(2)-(4)).
- 2. The <u>recreational trails program</u> under 23 U.S.C. 206 of title 23. See the <u>Recreational Trails</u> Program section.
- 3. The <u>safe routes to school program</u> eligible projects and activities listed at section 1404(f) of the SAFETEA-LU:
 - o <u>Infrastructure</u>-related projects.
 - Noninfrastructure-related activities.
 - SRTS coordinator. SAFETEA-LU section 1404(f)(2)(A) lists "managers of safe routes to school programs" as eligible under the noninfrastructure projects.

- 4. Planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.
 - See Boulevards from Divided Highways for examples.

TA Set-Aside projects must benefit the general public (23 CFR 1.23 and 23 CFR 460.2).

Not Eligible: TA Set-Aside funds cannot be used for the following activities because there is no authorization under the Federal-aid Highway Program:

- State or MPO administrative purposes. Exceptions:
 - See FHWA's Memo Allocating Indirect Costs to Projects, dated September 4, 2015.
 - RTP administrative costs of the State for RTP set-aside funds.
- Promotional activities, except as permitted under the <u>SRTS</u> (200 CFR 200.421(e)(3)).
- Routine maintenance and operations, except trail maintenance as permitted under the RTP.
- General recreation and park facilities, playground equipment, sports fields, campgrounds, picnic areas and pavilions, etc.

Location: There are no location restrictions for TA Set-Aside infrastructure projects; they are not required to be located along highways. Activities eligible under the TA Set-Aside also are eligible for STBG funds (23 U.S.C. 133(b)(15)). Under 23 U.S.C. 133(c)(3), projects eligible under the TA Set-Aside funded with STBG funds are exempt from the location restriction in 23 U.S.C. 133(c). Some aspects of activities eligible under the TA Set-Aside also may be eligible under other Federal-aid Highway Programs. See <u>STBG Eligibility</u>.

For <u>SRTS noninfrastructure projects</u>, traffic education and enforcement activities must take place within approximately two miles of a primary or middle school (Kindergarten through 8th grade). Other eligible SRTS noninfrastructure activities do not have a location restriction. SRTS infrastructure projects do not have location restrictions because SRTS infrastructure projects are broadly eligible under other TA Set-Aside eligibilities.

Attachment C

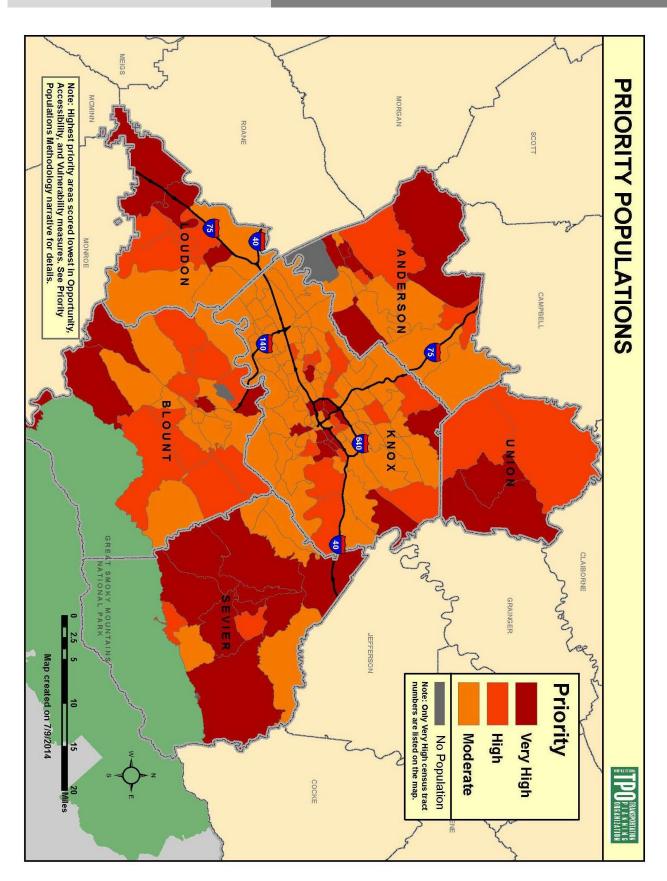
EVALUATION FACTORS

TRANSPORTATION ALTERNATIVES SET-ASIDE

FACTORS IN EVALUATING PROJECTS/PROGRAMS FOR TA FUNDING

- 1. Improving active transportation choices (50 points)
 - How well does the project/program improve people's ability to use active transportation (walking and bicycling) for everyday activities, such as traveling to work or school, shopping and socializing?
- 2. Serving Priority Populations (20 points)
 - Does the project/program serve Priority Populations within the TPO urbanized area? (See Attachment D for a Priority Populations map.)*
- 3. Improving access to transit (10 points; these points will not be included in the point total for projects/program outside of Knoxville)
 - Does the project/program increase opportunities for people to use active transportation to access public transportation?
- 4. Implementing plans (10 points)
 - Is the project/program part of an adopted plan to improve access to active transportation at the neighborhood, local or regional scale?
- 5. Creating regional connections (10 points)
 - Is the project/program part of an effort to create linkages or promote active transportation across municipal boundaries?
- 6. Stretching our funding further (10 bonus points)
 - Is the local share of the funding greater than 20 percent?

^{*} Priority Populations are those living in places with a high concentration of people meeting certain characteristics based on Census data, including: seniors, those living in households with no motor vehicles, people with disabilities, racial minorities, and people living in poverty. Priority Populations are more likely to have health problems and are more dependent on transit, walking and bicycling for transportation.



Appendix G: April 26, 2017 Resolution to Amend the FY17-20 TIP

A RESOLUTION BY THE EXECUTIVE BOARD OF THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION AMENDING THE FY 2017-2020 TRANSPORTATION IMPROVEMENT PROGRAM

WHEREAS, the FY 2017-2020 Knoxville Regional Transportation Improvement Program was adopted on October 26, 2016; and

WHEREAS, in accordance with requirements of the U.S. Department of Transportation, the elements of the transportation planning process are to receive final approval from the Executive Board of the local Metropolitan Planning Organization; and

WHEREAS, the Transportation Improvement Program must be updated as needed; and

WHEREAS, the proposed project amendments were reviewed with the Knoxville-Area Air Quality Interagency Consultation Group with respect to air quality conformity requirements and are either exempt from, or were demonstrated to conform with the federal transportation air quality conformity regulations from the Clean Air Act; and

WHEREAS, a conformity determination report with a full revised regional emissions analysis was prepared for the project amendments which concluded that air quality conformity was demonstrated; and

WHEREAS, the amended FY2017-2020 TIP was updated consistent with the Mobility Plan 2040; and

WHEREAS, the Knoxville Regional Transportation Planning Organization Technical Committee recommends approval of the Resolution, and

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

That the FY 2017-2020 Transportation Improvement Program be amended to include the following changes and that the Tennessee Department of Transportation include these amendments into the State Transportation Improvement Program:

Amendment to add the following new projects to the FY2017-2020 TIP: 17-2017-204 (Purchase KAT Vehicles - Fixed Route Buses), 17-2017-205 (KAT Implementation of ITS Technologies), 17-2017-206 (Purchase KAT Vehicles - Fixed Route Trolley Buses), 17-2017-207 (Purchase KAT Vehicles - Neighborhood Service Buses), 17-2017-208 (KAT Purchase of ADA Paratransit Vans), 17-2017-203 (ETHRA Transit Vehicle Replacement Project), 17-2014-015 (Papermill Drive Complete Street), 17-2017-017 (Magnolia Avenue Streetscape - Phase 3 and 4), 17-2017-011 (East Knox Greenway - Phase 1), 17-2017-009 (First Creek Greenway - Broadway Streetscape), 17-2017-030 (Schaad Road Extension), 17-2017-003 (Pellissippi Pkwy/Hardin Valley Interchange), 17-2017-007 (Amerine Road Improvements), 17-2017-005 (US 129 Widening), 17-2017-031 (Robert C. Jackson Drive Extension), 17-2017-006 (Maryville to Townsend Greenway - Phase 1 (Brown Creek)), 17-2017-023 (Tesla Blvd), 17-2017-004 (J. Carmichael Greer Pedestrian Bridge), 17-2017-306 (Planning and Studies Grouping), 17-2017-308 (Bike and Pedestrian Grouping), 17-2017-307 (Maintenance and Repair Grouping). The TIP project pages are in the Executive Board agenda package.

Amendment to remove 17-2014-038 (Washington Pike) and 17-2014-040 (Kingston Pike at Campbell Station Road) from the FY2017-2020 TIP. These projects are both on hold. The TIP project pages are in the Executive Board agenda package.

Amendment to add and update funding to the following projects in the FY2017-2020 TIP: 17-2014-204 (CAC Volunteer Assisted Transit Vehicle Replacement), 17-2014-037 (Pleasant Ridge Rd.), 17-2014-006 (Schaad Road Widening), 17-2014-082 (Union Road/N. Hobbs Road), 17-2014-007 (Foothills Mall Dr. Extension), and 17-2017-305 (STBG Transportation Alternatives Grouping). The new and amended TIP project pages are in the Executive Board agenda package.

Amendment to update the text of the FY2017-2020 TIP document by: adding a statement about the Highway Safety Improvement Program performance measures requirements, adding TIP programming policies that apply to projects with TPO managed grant funds only, updating description of TIP process and timeline, updating description of groupings, updating financial tables, adding acronym definitions, revising All Projects Summary Table, updating Appendix B Call for Projects Application, adding Appendix F: Transportation Alternatives Call for Projects Application, adding Appendix G April 26, 2017 TPO Executive Board TIP Amendment Resolution, and updating the graphic design of the document.

April 26, 2017 Date

Mayor Thomas Taylor City of Maryville

TPO Executive Board Chair

Jeffrey A. Welch, AICP

Director, Knoxville Regional TPO