*September 2018*

# APPENDIX

# MOBILITY PLAN 2040

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# APPENDIX A COMMONLY USED ACRONYMS

The following is a list of commonly used acronyms in planning and in the Mobility Plan.

## A

| | |
|---|---|
| **AADT** | Average Annual Daily Traffic |
| **AASHTO** | American Association of State and Highway Transportation Officials |
| **ADA** | Americans with Disabilities Act of 1990 (legislation) |
| **ADT** | Average Daily Traffic |
| **AICP** | American Institute of Certified Planners |
| **APA** | American Planning Association |
| **APTA** | American Public Transportation Association |
| **AUA** | Adjusted Urbanized Area |
| **AVL** | Automatic Vehicle Location |

## B

| | |
|---|---|
| **BAC** | Bicycle Advisory Committee |
| **BEA** | Bureau of Economic Analysis |
| **BLS** | Bureau of Labor Statistics |
| **BMS** | Bridge Management System |
| **BRR** | Bridge Replacement and Rehabilitation funds |
| **BRT** | Bus Rapid Transit |
| **BTS** | Bureau of Transportation Statistics |

## C

| | |
|---|---|
| **CAA** | Clean Air Act (legislation) |
| **CAAA** | Clean Air Act Amendment of 1990 (legislation) |
| **CAC** | Knoxville-Knox County Community Action Committee |
| **CAFE** | Corporate Average Fuel Economy Standards |
| **CBD** | Central Business District |
| **CDR** | Conformity Determination Report |
| **CFR** | Code of Federal Regulations |
| **CMAQ** | Congestion Mitigation and Air Quality Improvement Program |
| **CMP** | Congestion Management Process |
| **CMS** | Congestion Management System |
| **CON** | Construction |
| **CSA** | Combined Statistical Area |
| **CO2** | Carbon Dioxide (air quality) |
| **CPI** | Consumer Price Index |
| **CSD** | Context Sensitive Design |

## D

| | |
|---|---|
| **DMS** | Dynamic Message Sign |
| **DOE** | Department of Energy |

## E

| | |
|---|---|
| **EA** | Environmental Assessment |
| **EIS** | Environmental Impact Statement |
| **EJ** | Environmental Justice |
| **EPA** | Environmental Protection Agency |
| **ETQG** | East Tennessee Quality Growth |
| **ETDD** | East Tennessee Development District |
| **ETHRA** | East Tennessee Human Resources Agency |

## F

| | |
|---|---|
| **FAA** | Federal Aviation Administration |
| **FAST Act** | Fixing America's Surface Transportation Act |
| **FEMA** | Federal Emergency Management Agency |
| **FFP** | Financially Feasible Plan |
| **FHWA** | Federal Highway Administration |
| **FLHP** | Federal Lands Highway Program |
| **FMCSA** | Federal Motor Carrier Safety Administration |
| **FOIA** | Freedom of Information Act (legislation) |
| **FRA** | Federal Railroad Administration |
| **FTA** | Federal Transit Administration |
| **FY** | Fiscal Year |

## G

| | |
|---|---|
| **GHG** | Greenhouse Gases (air quality) |
| **GHSO** | Governor's Highway Safety Office |
| **GIS** | Geographic Information Systems |
| **GSMNP** | Great Smoky Mountains National Park |

## H

| | |
|---|---|
| **HBRRP** | Highway Bridge Replacement and Rehabilitation Program |
| **HHS** | Department of Health and Human Services |
| **HOV** | High Occupancy Vehicle |
| **HOT** | High Occupancy Toll |
| **HPMS** | Highway Performance Monitoring System |
| **HPP** | High-Priority Project (funding) |
| **HSTCC** | Human Services Transportation Coordination Committee |
| **HTF** | Highway Trust Fund (funding) |
| **HUD** | United States Department of Housing and Urban Development |

## I

| | |
|---|---|
| **IAC** | Inter-Agency Consultation (air quality) |
| **IHS** | Interstate Highway System |
| **IM** | Interstate Maintenance funds (funding) |
| **IRI** | International Roughness Index (pavement) |
| **IT** | Information Technology |
| **ITS** | Intelligent Transportation Systems |

## J

| | |
|---|---|
| **JARC** | Job Access and Reverse Commute |

## K

| | |
|---|---|
| **KAT** | Knoxville Area Transit |
| **KCP** | Knoxville Commuter Pool |
| **KRTPO** | Knoxville Regional Transportation Planning Organization |
| **KTA** | Knoxville Transportation Authority |

# L

| | |
|---|---|
| **LAMTPO** | Lakeway Area Metropolitan Transportation Planning Organization |
| **LEED** | Leadership in Energy and Environmental Design |
| **LIC** | Local Interstate Connector Program (funding) |
| **LOS** | Level of Service |
| **LRMP** | Long Range Mobility Plan (see also RMP) |
| **LRT** | Light Rail Transit |
| **L-STBG** | Local Surface Transportation Block Grant |

# M

| | |
|---|---|
| **MAP-21** | Moving Ahead for Progress in the 21st Century Act (legislation) |
| **MCSA** | Micropolitan Statistical Area |
| **MKAA** | Metropolitan Knoxville Airport Authority |
| **MOA** | Memorandum of Agreement |
| **MOVES** | Motor Vehicles Emissions Simulator |
| **MPC** | Knoxville-Knox County Metropolitan Planning Commission |
| **MPA** | Metropolitan Planning Area |
| **MPG** | Miles Per Gallon |
| **MPO** | Metropolitan Planning Organization (see also TPO) |
| **M&O** | Management & Operations |
| **MSA** | Metropolitan Statistical Area |
| **MTP** | Metropolitan Transportation Plan (see also RMP) |
| **MVEB** | Motor Vehicle Emission Budgets (air quality) |

# N

| | |
|---|---|
| **NAA** | Nonattainment Area (air quality) |
| **NAAQS** | National Ambient Air Quality Standard |
| **NEPA** | National Environmental Policy Act (legislation) |
| **NHPP** | National Highway Performance Program |
| **NHS** | National Highway System (funding) |
| **NHTSA** | National Highway Traffic Safety Administration |
| **NOx** | Nitrogen Oxides (air quality) |
| **NPS** | National Park Service |
| **NSBP** | National Scenic Byways Program |

# O

| | |
|---|---|
| **O&M** | Operating and Maintenance (funding) |

# P

| | |
|---|---|
| **PE** | Preliminary Engineering |
| **PL** | Planning Funds (funding) |
| **PlanET** | Plan East Tennessee |
| **PM2.5** | Fine Particulate Matter (2.5 microns) (air quality) |
| **POV** | Privately Owned Vehicle |
| **PPI** | Producer Price Index |
| **ppm** | parts per million (air quality) |
| **PUD** | Planned Unit Development |

# R

| | |
|---|---|
| **RMP** | Regional Mobility Plan |
| **ROW** | Right of Way |
| **RPO** | Rural Planning Organization |
| **RTP** | Recreational Trails Program |
| **RTPC** | Regional Transportation Planning Council |

## S

| | |
|---|---|
| **SHSP** | Strategic Highway Safety Plan |
| **SIA** | State Industrial Access Program |
| **SIP** | State Implementation Plan |
| **SOGR** | "State of Good Repair" |
| **SOV** | Single Occupancy Vehicle |
| **SPR** | State Planning and Research Funds (funding) |
| **SR** | State Route |
| **SRTS** | Safe Routes to School |
| **STIP** | Statewide Transportation Improvement Program |
| **S-STBG** | State Surface Transportation Block Grant |

## T

| | |
|---|---|
| **TAP** | Transportation Alternatives Program |
| **TAZ** | Traffic Analysis Zone (modeling) |
| **TCM** | Transportation Control Measure |
| **TDEC** | Tennessee Department of Environment and Conservation |
| **TDH** | Tennessee Department of Health |
| **TDM** | Travel Demand Management |
| **TDOS** | Tennessee Department of Safety |
| **TDOT** | Tennessee Department of Transportation |
| **TDR** | Transfer of Development Rights |
| **TE** | Transportation Enhancements (funding) |
| **TIP** | Transportation Improvement Program |
| **TMA** | Transportation Management Area |
| **TMC** | Traffic Management Center |
| **TND** | Traditional Neighborhood Development |
| **TNSHPO** | Tennessee State Historic Preservation Office |
| **TOD** | Transit-Oriented Development |
| **TPO** | Transportation Planning Organization |
| **TPR** | Transportation Planning Report |
| **TPWP** | Transportation Planning Work Program |
| **TRB** | Transportation Research Board |
| **TSM** | Transportation System Management |
| **TTF** | Transportation Trust Fund |
| **TVA** | Tennessee Valley Authority |
| **TWRA** | Tennessee Wildlife Resources Agency |
| **TYS** | McGhee Tyson Airport |

## U

| | |
|---|---|
| **UC** | Urban Cluster (as defined by the Census Bureau) |
| **ULAM** | Urban Land Allocation Model |
| **UPWP** | Unified Planning Work Program (see also TPWP) |
| **USDOT** | United States Department of Transportation |
| **USGS** | United States Geological Survey |
| **UTK** | University of Tennessee at Knoxville |
| **UA** | Urbanized Area (as defined by the Census Bureau) |

## V

| | |
|---|---|
| **V/C** | Volume to Capacity |
| **VHT** | Vehicle Hours Traveled |
| **VMS** | Variable Message Sign |
| **VMT** | Vehicle Miles Traveled |
| **VOC** | Volatile Organic Compounds (air quality) |

# APPENDIX B COMMONLY USED TERMS

The following is a list of commonly used terms in planning and in the Mobility Plan.

## #

**1-Hour Ozone Standard** A national ambient air quality standard set for ozone based on the peak 1-hour concentration of ozone measured at a monitoring site. The maximum level of ozone allowed under the standard is 124 parts per billion of ozone. The EPA implemented a revised 8-Hour Ozone Standard effective on June 15, 2004, with the 1-Hour Standard being replaced by the 8-Hour Standard one year later on June 15, 2005.

**8-Hour Ozone Standard** Similar to 1-Hour Standard, but changes measurement to a maximum level of exposure over an 8-hour average timeframe. The 1997 Ozone Standard effective on June 15, 2004 set the maximum level at 84 ppb and the 2006 Ozone Standard effective on July 20, 2012 set the maximum level at 75 ppb.

## A

**Access Management** A set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways for the purpose of improving the safety and efficiency of roadways.

**Adaptive Reuse** Rehabilitation or renovation of existing buildings or structures for uses other than the current ones.

**Affordable Housing**Housing that a low- or moderate-income household can occupy without spending more than 30% of household income. Also incorporates the idea of quality (safe and decent dwelling), choice of location, and an adequate supply.

**Americans with Disability Act (ADA)** Federal legislation outlining specific rights of persons with disabilities, and providing that publicly funded mass transit agencies must provide complementary paratransit service within the fixed-route service area to those persons unable to use fixed-route service because of a disability.

**Arterial Roadway** A major roadway facility with the primary function of traffic movement that connects activity centers in the region.

**Auto Occupancy** The number of persons per automobile, including the driver.

**Average Annual Daily Traffic (AADT)** The total volume of traffic on a highway segment for one year, divided by the number of days in the year.

## B

**Bicycle Advisory Committee (BAC)** An appointed committee composed of representatives of various government agencies, law enforcement officials, and private citizens interested in bicycle issues. The BAC advises the TPO in the process of planning and developing bicycle facilities and promoting bicycle use in the TPO area.

**Bicycle Facilities** A general term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling, including parking and storage facilities, and shared

roadways not specifically designated for bicycle use.

**Bike Lane** A portion of a roadway, sharing the same right-of-way with motorized vehicles, but designated for the preferential or exclusive use of bicyclists.

**Bikeway** A generic term for any road, street or path that is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

**Brownfield** Industrial or commercial property that is abandoned or underused and environmentally contaminated, especially one considered as a potential site for redevelopment.

**Bus Rapid Transit (BRT)** A flexible high-performance form of rapid transit that combines features of rail systems with those of over-the-road vehicles, and is characterized by being able to operate in special-purpose lanes or on city streets.

**Busway**Two-lane facility, one lane per direction, on exclusive right-of-way dedicated for buses only. Grade separation at high-volume cross streets and gate crossing arms at low-volume crossings are assumed.

# C

**Capital Improvement Program (CIP)** An itemized program for a multi-year prospective period, and any amendments thereto, subject to at least biennial review, setting forth the schedule, timing, and details of specific contemplated capital improvements by year, together with their estimated cost, the need for each improvement, financial sources, and the financial impact that the improvements will have on the local governmental unit or school district.

**Carpool** Transportation by auto, on a scheduled or unscheduled basis, with at least two occupants.

**Circulator System** Means of movement provided within a major activity center (such as a regional business concentration or community) for going from place to place within the center; such a system may be entirely pedestrian or may use transit.

**Clean Air Act (CAA)** The U.S. Clean Air Act, referring to the Air Pollution Control Act of 1955, as amended.

**Collector Roadway** A minor roadway facility primarily serving to provide access to and from local streets and adjacent land uses.

**Commuter Rail** Public transportation mode using passenger trains operating on railroad right-of-way. Generally, commuter rail systems are integrated with other regional transit providers to permit transfers throughout a region.

**Comprehensive Plan** Plan for the development of an area, which recognizes the physical, economic, social, political, aesthetic, and related factors of the community involved. (Compare with local comprehensive plan.)

**Conformity** An analysis which demonstrates that a transportation plan, program, or project conforms with the State Implementation Plan purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) and achieving expeditious attainment of such standards; and that such activities will not cause or contribute to any new violation of any standard in any area; increase the frequency or severity of any existing violation of any standard in any area; or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

**Congestion** Overloading of roadway with vehicles (see Level of Service).

**Congestion Management Process (CMP)** A systematic process designed to emphasize effective management of existing transportation facilities through the use of travel demand and operational strategies.

**Congestion Mitigation and Air Quality Improvement Program (CMAQ)**A program under MAP-21 that provides funding for projects that contribute to the attainment of the National Ambient Air Quality Standards (NAAQS). Eligible projects include intersection projects, transit projects, and Transportation Management Organizations/Initiatives.

**Congestion Pricing** The use of fees that are charged to manage traffic and avoid congestion, also called “value pricing.”

**Conservation** Natural resources management to prevent waste, destruction, or degradation.

**Context Sensitive Design** Inclusive design approach that integrates and balances community, aesthetic, and environmental values with traditional transportation safety and performance goals. Includes roadway standards and development practices that are flexible and sensitive to community values, balancing economic, social, aesthetic and environmental objectives.

**Coordinated Public Transit Human Services Transportation Plan** A unified, comprehensive strategy for public transportation services delivery that identifies the transportation needs of individuals with disabilities, older adults, and individuals with limited incomes, lays out strategies for meeting these needs, and prioritizes services.

**Corridor Studies** Typically, corridor studies focus on a segment of a particular travel corridor or travel shed. A corridor study may look at land use, access issues, capacity, level of service, geometrics, multiple modes of travel, and safety concerns, analyzes alternatives, and makes recommendations.

**Cost-Sharing** Contractual arrangement whereby a local unit of government or other governmental body enters into an agreement to pay for part of a physical facility or a service; includes subscription transit service.

# D

**Degradation** A decline to a lower condition, quality, or level.

**Demand Management** A set of strategies that promote increased efficiency of the transportation system by reducing the incidence of single occupant vehicle travel.

**Demand-Response** Any type of public transportation involving flexibly scheduled service that is deployed upon a person's request for a trip.

**Density** Number of dwelling units per net residential acre of land.

**Design hour volume** Traffic volume used to determine the appropriate design features of a roadway.

**Developable Land** Land that is suitable as a location for structures and that can be developed free of hazards to, and without disruption of, or significant impact on, natural resource areas including surface waters, wetlands, floodplains, parks, steep slopes.

**Disadvantaged Business Enterprise (DBE) Program** A U.S. Department of Transportation program that helps small businesses owned and controlled by socially and economically disadvantaged individuals, including minorities and women, to participate in contracting opportunities for federally funded capital improvement projects.

# E

**Environmental Justice (EJ)** 1994 executive order requiring analysis of the effects of federally funded programs, plans and actions on racial minority populations and low-income populations.

**Exempt Project** Projects that are determined to be exempt from the requirement to determine air quality conformity such as safety, maintenance, certain transit and other projects as determined through Interagency Consultation. These projects may proceed toward implementation even in absence of a conforming transportation plan and TIP.

# F

**FAST Act** Fixing America's Surface Transportation (FAST) Act (Pub. L. No. 114-94) was signed into law on December 4, 2015. It is the first federal law in over a decade to provide long-term (5 years) funding for surface transportation planning and investment.

**Federal Highway Administration (FHWA) Metropolitan Planning (PL) Funds** Source of planning funds allocated in UPWP in accordance with 23 U.S.C., Section 134.

**Federal Transit Administration (FTA) Section 5303** Source of transit planning funds allocated in the TPWP in accordance with SAFETEA-LU and 49 U.S.C., Chapter 53.

**Financial Constraint** The requirement that the proposed projects in the transportation plans for an area must not have costs that exceed the reasonably expected revenues.

**Fixed-Route Transit** Service that follows a specified route of travel with identified stops for passengers and an established schedule; regular-route transit.

**Food Desert** The U.S. Department of Agriculture's Economic Research Service defines food desert as a low income census tract where either a substantial number or share of residents has low access to a supermarket or large grocery store.

**Forecast** A calculation of growth, for example in population, households, and jobs based on data about current conditions (e.g., the 2010 Census) that is extrapolated into the future.

**Freeway** A divided highway with two or more lanes for the exclusive use of traffic in each direction, and with full control of access and egress.

**Functional Classification** Classification of roadways according to their primary function— mobility for through trips or access to adjacent lands. A four-class system is used to designate roads (principal arterials, minor arterials, collectors, and local streets).

## G

**General Aviation** All aviation activity other than that of the scheduled air carriers and the military. General aviation includes single- and twin- engine aircraft with gross weights ranging from 2,000 to 60,000 pounds.

**Grade Separation** Intersection of traffic by provision of crossing structures, underpasses or overpasses; interchanges.

## H

**Headway** The amount of time between successive arrivals of a bus on a fixed bus route.

**High-Occupancy Toll (HOT) Lanes** Combines HOV and pricing strategies by allowing single occupancy vehicles to gain access to HOV lanes by paying a toll.

**High-Occupancy Vehicle (HOV) Lanes** Highway lanes reserved for vehicles carrying more than one person. The specific number of people in the vehicle or class of vehicles who can use this facility is established locally. These lanes are officially denoted with a diamond marking and are sometimes called "diamond lanes."

**Highway Beautification Act** Federal legislation passed in 1965 providing for the cleanup and beautification of federal highways.

**Highway Performance Monitoring System (HPMS)** Summary information obtained from a sample of the arterial and collector functional systems to assess highway condition, performance, air quality trends, and future investment requirements.

**Household** Group of all the people who occupy a housing unit.

**Housing Stock** An inventory or description of a community's existing residences by age, condition, structure type, number of bedrooms, rental cost, or value.

## I

**Impact Fees** Charges to individuals or groups intended to supplement existing funding and to account for the increased use of public facilities or services.

**Incident Management System** An Intelligent Transportation System monitoring process that provides traffic operators with the tools to allow quick and efficient response to accidents, hazardous spills, and other emergencies. Redundant communications systems are used to link data collection points, transportation operations centers, and travel information portals.

**Infill** Development or redevelopment of land that has been bypassed, remained vacant, and/or is underused.

**Infrastructure** Fixed facilities, such as sewer lines and roadways that serve existing and new development and redevelopment.

**Intelligent Transportation System (ITS)** Development or application of technology (electronics, communications, or information processing) to improve the efficiency and safety of surface transportation systems. ITS is divided into five categories that reflect the major emphasis of application: Advanced Traffic Management Systems, Advance Traveler Information Systems, Advanced Public Transportation Systems, Automatic Vehicle Control Systems, and Commercial Vehicle Operations

**Intensity of Development** Relative measure of development as defined by characteristics such as the number of dwelling units per acre, number of employees, amount of traffic generated, and amount of site covered.

**Interagency Consultation (IAC)** The formal process used to involve stakeholder agencies into the air quality conformity determination development.

**Intermodal** Denotes the seamless movement of people or cargo between transport modes (e.g., rail to heavy truck).

**Intermodal Facilities** Transportation facilities that provide for linkages between travel modes, such as rail or bus stations at airports.

## J

**Job Access Reverse Commute (JARC)** An FTA grant program to improve access to transportation services to employment and employment-related activities for welfare recipients and eligible low-income individuals.

## L

**Land use categories** Standardized system for classifying and designating the appropriate use of properties.

**Level of Service (LOS)** As related to highways, the different operating conditions that occur on a lane or roadway when accommodating various traffic volumes. It is a qualitative measure of the effect of traffic flow factors, such as speed and travel time, interruption, freedom to maneuver, driver comfort and convenience, and indirectly, safety and operating costs. It is expressed as levels of service "A" through "F." Level "A" is a condition of free traffic flow where there is little or no restriction in speed or maneuverability caused by presence of other vehicles. Level "F" is forced-flow operation at low speed with many stoppages, with the highway acting as a storage area.

**Life-Cycle Maintenance** Concept of keeping a facility useable at least through its design life by conducting scheduled maintenance.

**Light Rail Transit (LRT)** Electrically propelled vehicle operated singly or in trains on predominantly reserved, but not necessarily grade-separated, rights-of-way.

**Limited English Proficiency (LEP) Plan** A strategy developed by the MPO to help recognize and assist a person who does not speak, read, write or understand English very well.

**Local Government** Municipal units of government such as counties, cities, and towns.

**Local Roadway** A road, usually with low traffic volume, designed to serve adjacent development rather than through traffic.

**Long Range Transportation Plan (LRTP)** See Regional Mobility Plan (RMP)

**Low Impact Development (LID)** Simple management and preservation technique used to restore aquatic, terrestrial, and biologic natural resources.

**Low Income** Household income that is 80% or less of the area median income, as defined by the U.S. Department of Housing and Urban Development.

# M

**Maintenance Area** A classification of an area, which was in nonattainment of an air quality standard at one point in time and is required to demonstrate the ability to maintain the standard.

**Major Construction** Roadway projects that increase the operational characteristics of a highway facility, including decreasing congestion, increasing operating speed, and reducing accidents.

**Median Income** Income measure used by the U.S. Department of Housing and Urban Development. The median income of a population is the level at which half the population has a higher income and half has a lower income.

**Metropolitan Transportation Plan (MTP)** See Regional Mobility Plan (RMP)

**Mixed Use** Single building containing more than one type of land use or a single development of more than one building and use, where the different land uses are in close proximity, planned as a unified, complementary whole, and functionally integrated with transit, pedestrian access and parking areas.

**Mobility** The ability to travel from one place to another.

**Moderate Income** Household income that is 80% of the area's median income.

**Motor Vehicle Emissions Budget (MVEB)** Established by the SIP, it sets out the maximum levels of emissions from on-road mobile sources for an area.

**MOVES** EPA's Motor Vehicle Emission Simulator (MOVES) is a state-of-the-science emission modeling system that estimates emissions for mobile sources at the national, county, and project level for criteria air pollutants, greenhouse gases, and air toxics.

**Moving Ahead for Progress in the 21st Century Act (MAP-21)** The federal transportation bill passed in 2012. It restructured many transportation funding programs and provided two years of funding.

**Multifamily Housing** Residential structure with two or more separate dwelling units.

**Multi-modal** Utilizing more than one means of transportation.

**Multimodal Link** The connection between two or more passenger transportation methods (such as bicycle, walking, automobile and transit).

# N

**National Ambient Air Quality Standards (NAAQS)** Minimum air quality standards established by the Clean Air Act Amendments of 1990.

**National Highway System (NHS)** Transportation system consisting of approximately 155,000 miles of highway in order to provide an interconnected system of principal arterial routes serving major population centers, major transportation facilities, major travel destinations, interstate and interregional travel and meeting national defense requirements.

**New Freedom** An FTA formula grant program to provide additional tools to overcome existing barriers facing Americans with disabilities seeking integration into the workforce and full participation in society.

**Noise Abatement** The attempt to reduce the amount and level of noise on and around airports, especially during takeoffs and landings, partly through special operational restrictions and proper land use planning for areas affected by aircraft noise.

**Nonattainment Area** An area designated by the U.S. Environmental Protection Agency as not being in attainment of the national standard for a specified pollutant.

**Nonpoint Source Pollution** Sources of pollution that are less definable and usually cover broad areas of land such as agricultural land with fertilizers or automobile pollution that are carried away by runoff. Discharge of waste cannot be located to a specific source.

# O

**Observed Peak-Hour Flow** Highest flow rate over one hour duration during a 24-hour period that has been measured and reported.

**Off-Peak Period** Time of day outside the peak period (see peak period).

**Operational Improvement** Capital improvement consisting of installation of traffic surveillance and control equipment, computerized signal systems, motorist information systems, integrated traffic control systems, incident management programs, and transportation demand and system management facilities, strategies and programs.

**Ordinance** Law or regulation set forth and adopted by a governmental authority, usually a city or county.

**Oxides of Nitrogen (NOx)** An emission resulting from the process of fuel combustion.

**Ozone** A secondary pollutant formed by the combination of VOCs and NOx in the presence of sunlight.

# P

**Paratransit Services** Transit service that provides generally more flexible and personalized service regular-route transit, using a variety of vehicles, such as large and small buses, vans, cars and taxis. Paratransit can serve a particular population, such as people with disabilities, or can be assigned to serve the general population. Paratransit is frequently provided in less densely populated areas, and used at times and in areas where trip demands are less concentrated, such as during weekends and evenings in urban settings.

**Park and Ride** Travel arrangement where people drive to a transit center, transfer station or terminal, park in the designated place, and use a transit vehicle for their ultimate destinations.

**Peak Hour** Hour during the peak period when travel demand is highest.

**Peak Period** The time on a weekday when traffic is usually heavy.

**Person Trip** One-way journey between two points by one person in a vehicle.

**PM2.5** PM2.5 particles are air pollutants with a diameter of 2.5 micrometers or less, small enough to invade even the smallest airways. These particles generally come from activities that burn fossil fuels, such as traffic, smelting, and metal processing.

**Point Source Pollution** A discrete source from which pollution is generated before it enters receiving waters, such as a sewer outfall, smokestack, or industrial waste pipe.

**Preservation** Preservation activities are directed toward the elimination of deficiencies and major cost replacement of existing transportation facilities. Preservation is not meant to include work that will increase the level of service by the addition of traffic lanes.

**Principal Arterials** High-capacity highways that make up the metropolitan highway system.

**Project** Group of tasks or methods designed to accomplish a specific purpose.

# Q

**Qualified Transportation Fringe Benefits** Employers may provide employees with transportation benefits, the value of which is exempt from federal taxes up to specified annual limits. Qualified transportation benefits include transit passes, rides in a commuter highway vehicle, or reimbursement for commuting by bicycle.

# R

**Ramp Metering** Electronically regulated flow of vehicles to increase capacity of through lanes and improve safety.

**Ramps** Connections to and from freeway facilities to the arterial and collector roadway system.

**Redevelopment** Process by which an existing building, structure, or developed area is adaptively reused, rehabilitated, restored, renovated and/or expanded.

**Regional Mobility Plan (RMP)** Requirement for the metropolitan transportation planning process under MAP-21, must have a minimum of 20-year horizon and be updated every four years in metro areas with greater than 200,000 population.

**Regionally Significant Project** A project that is on a facility that serves a regional transportation need and would normally be included in the modeling of an area's transportation network. These projects must be accounted for specifically in the regional air quality analysis.

**Regular-Route Transit Service** Operates on a predetermined, fixed route and schedule. The types of vehicle used in regular-route service are generally large buses or small buses. Regular route service can include local service, express service, or various levels of service in between.

**Rehabilitation** Roadway improvements intended to correct conditions identified as deficient without major changes to the cross section. These projects should consist of removal and replacement of base and pavement, shouldering and widening and drainage correction as needed.

**Reinvestment** Investment in redevelopment, infill, or adaptive reuse.

**Resilience** The ability of the transportation system to provide and maintain an acceptable level of service or functionality in the face of major

**Ridership** The total number of riders on a vehicle, trip, route or system over an identified period of time.

**Ridesharing** A service with two or more persons in the vehicle consisting usually a prearranged carpool, vanpool or subscription bus. Car and vanpooling intended primarily to serve the work trip.

**Route Deviation** A service operating on a fixed route from which vehicles may deviate to pick up or drop off passengers. Requests for route deviation may come by phone via radio contact with the driver or may be requested by a passenger upon boarding. Deviation from the route may include a premium charge for the extra service. Generally, this strategy utilizes a small vehicle.

**Routine Maintenance** Roadway maintenance consisting of snow and ice control, mowing, sweeping, periodic applications of bituminous overlays, seal treatments, milling, crack routing and filling and base repair. These treatments are intended to help ensure the roadway can be used to the end of its design life. These projects are ineligible for federal funding.

# S

**Signal Preemption** Technology that triggers the green go-ahead on meters or traffic lights to allow transit vehicles to more quickly move through freeway ramp entrances or intersections.

**Smart Growth** Pro-growth approach to guiding development into more convenient patterns and into areas where infrastructure allows growth to be sustained over the long term. It envisions developments of complementary land uses, including affordable and lifecycle housing, retail and offices, on interconnected streets amenable to walking, bicycling, or using transit or car to reach destinations.

**Special Transportation Services** Transit services provided on a regular basis to elderly and disabled persons who are unable to use regular means of transportation. Rides are provided through a variety of public and private entities, including social services and transit agencies, using lift-equipped vans, taxis, buses and volunteer drivers.

**Staging** A plan that documents the planned timing of development and growth in an area so that the development and growth are coordinated with needed public infrastructure in accordance with the adopted policies and plans.

**State Implementation Plan (SIP)** A federally approved State Plan that documents emission control strategies for criteria pollutants (such as carbon monoxide, nitrogen dioxide, ozone, lead, particulate matter, and sulfur dioxide), which are applicable in air quality nonattainment and attainment/ maintenance areas to protect the air quality in the air shed. State Implementation Plans can be extensive, containing state regulations or other enforceable documents and supporting information such as emission inventories, monitoring networks, and modeling demonstrations.

**Stormwater** Surplus surface water generated by rainfall and snowmelt that does not seep into the earth but flows overland to rivers, lakes, or streams.

**Surface Transportation Block Grant (STBG)** One of the five core federal highway funding programs. Flexible funding that may be used by states and localities for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for non-motorized transportation, transit capital projects and public bus terminals and facilities.

**Sustainable Development** Development that maintains or enhances economic opportunity and community well-being while protecting and/or restoring the natural environment upon which people and economies depend. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.

# T

**Telecommuting** Eliminating or reducing commuter trips by routinely working part or full-time at home or at a satellite work station closer to home.

**Throughput** Amount of vehicles that can pass a point on a roadway or pass through an intersection over a specified period of time. Can be equated to capacity if considering vehicles alone.

**Tolls** Fee collected for the use of a road.

**Traffic Analysis Zone (TAZ)** A small geographic area for which socioeconomic data is estimated in the TPO travel demand model.

**Traffic Calming** Techniques such as speed bumps, narrow lanes and traffic circles used to slow traffic in primarily residential neighborhoods.

**Traffic Signal Control Systems** Degree of traffic management of an arterial is grouped and defined as follows:

- Fixed time – Traffic signals on an arterial are controlled locally through a time clock system. In general, the progression of a through band (the amount of green time available along an arterial at a given speed) along the arterial in the peak direction is determined by past experience and is not a function of immediate traffic demand.
- Semi-actuated – Traffic signals along the arterial are designed to maximize the green time on the major route in the major direction. Timing and through band are based upon historical records. Use of green time on the minor leg depends on real-time demand and maximized based upon total intersection delay.
- Interconnection – A traffic signal system in which data collected at individual signals is shared with a central processor or controller. Adjustments in traffic signal control can be made based upon incoming data as opposed to historical data.
- Optimization – The process in which a traffic signal or system is modified to maximize the amount of vehicles passing through the intersection for all approaches or on the major road in the peak direction.
- Real-time adaptive control – An advanced traffic control system that incorporates current technologies in communications, data analysis, and traffic monitoring to provide real-time traffic control of arterials, corridors or roadway networks.

**Transit Advantages** Facility improvements that offer travel-time benefits and connections to multi-occupant vehicle services such as bus lanes, ramp meter bypasses, HOV lanes, transit stations, and major park-and-ride lots.

**Transit Centers** Locations where timed-transfer connections between transit modes is facilitated. Transit centers are usually at shopping centers or other high-pedestrian locations.

**Transit Dependence** Reliance on transit for travel needs because of age-related or economic limitations and/or physical or mental disability.

**Transit Facility** The property, structures and other improvements used to provide mass transportation for passengers including park and ride stations, transfer stations, and parking lots.

**Transit Market Area** The geographic area that draws riders of the transit system.

**Transit Route** An existing or planned route for public transit service in the plan of the relevant transit service provider.

**Transit Stations**
Stops along rail lines and busways.

**Transit Trip**
Person trip as a passenger of a transit vehicle.

**Transportation Control Measure (TCM)** Any measure that is specifically identified and committed to in the applicable implementation plan that is either one of the types listed in Section 108 of the Clean Air Act Amendments, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Examples of TCM include programs for improved transit service, employer-based transportation management plans, trip-reduction ordinances, traffic flow improvement programs, programs and facilities for telecommuting, and other programs and ordinances to facilitate non-automobile travel, such as the use of bicycles.

**Transportation Corridor** A defined area through which people move from one major center to another or from a major center to a dispersal area. A transportation corridor may contain several transit routes and highways.

**Transportation Demand Management (TDM)**
Programs and methods to reduce effective demand. In the broadest sense, any activity or facility that reduces vehicle trips would fall within this classification. The highest priority in the region is given to reducing single-occupant vehicle trips in the peak periods. Techniques that might be utilized are carpooling, vanpooling, transit, alternative work hours, transportation management associations, and land development or ordinances that discourage vehicle trips and encourage walking, biking, ridesharing and transit trips.

**Transportation Disadvantaged (TD)**
Those persons who, because of physical or mental disability, income status, or age are unable to transport themselves or to purchase transportation and are, therefore, dependent on others to obtain access to health care, employment, education, shopping, social activities, or other life-sustaining activities.

**Transportation Enhancement (TE) Program/ Transportation Alternatives** A federal funding program under SAFETEA-LU Sections 1113, 1122 and 6003 that apportions a 10% set-aside of the Surface Transportation Funding Program to transportation enhancements such as provision of bicycle and pedestrian facilities, provision of safety and educational activities for pedestrian and bicyclists, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, land rehabilitation and operation of historic transportation buildings, preservation of abandoned railway corridors, control and removal of outdoor advertisement, archeological planning and research, environmental mitigation, and environmental museums. MAP-21, passed in 2012, replaced this program with Transportation Alternatives, which encompasses most activities previously funded under Transportation Enhancement, plus some additional activities.

**Transportation Impact Fee** An assessment levied by local governments against land development activity to help mitigate its impact to the existing transportation infrastructure by funding transportation improvements required to provide for public services and facilities needed to service the proposed new growth in land development.

**Transportation Improvement Program (TIP)**
A three-year document listing a four-year program of projects with some phase of work to be implemented such as design, right-of-way or construction.

**Transportation Management Area (TMA)**
Areas subject to special requirements under the federal transportation bill that benefit from preferential treatment with regard to air quality needs and local authority to select transportation projects. Any urban area over 200,000 in population is automatically a TMA, which subjects it to additional planning requirements but also entitles it to funds earmarked for large urbanized areas under the Surface Transportation Program.

**Transportation Planning Organization (TPO)**
Each urbanized area in the U.S. with greater than 50,000 population must have an MPO (Metropolitan Planning Organization) in order to coordinate transportation planning. In the Knoxville Urbanized Area, the name TPO was chosen to better represent the activities that are performed.

**Travel Demand Forecasting Model** A computer software tool developed to estimate the travel activity of a region based on the correlation between household-level characteristics and travel behavior.

**Trip Attraction Variables** Based on employment conditions, trip attraction variables are used by the Regional Transportation Analysis traffic demand model to simulate the attraction of vehicle trips to various destination points.

**Trip Production Variables** Based on land use conditions and population statistics, trip production variables are used by the traffic demand model to simulate the generation of vehicle trips from various points of origin.

# U

**User Cost** Total dollar cost of a trip to a user for a particular mode of transportation. Includes out-of-pocket costs such as transit fares, gas, oil, insurance, and parking for autos plus a valuation of implicit cost, such as waiting and travel times.

# V

**Vanpool** Paratransit service by van on a scheduled or unscheduled basis with at least five persons as occupants.

**Vehicle Miles of Travel (VMT)** Is calculated from the average daily traffic volume multiplied by the length of roadway.

**Vehicle Trip** One-way journey made by an auto, truck or bus to convey people or goods.

**Volatile Organic Compounds (VOC)** VOCs are emitted in the storage and use of fuel, solvents, and many industrial and consumer chemicals, as well as from vegetation.

# Z

**Zoning** The classification of land by types of uses permitted and prohibited and by densities and intensities permitted and prohibited. Regulations govern lot size, building placement, and other development standards.

# APPENDIX C
# TECHNICAL DATA

**TableC-1:** Tennessee Traffic Fatality Rate

| Year | Traffic Fatalities | Annual VMT (100,000 miles) | Fatality Rate/VMT |
|---|---|---|---|
| 2005 | 1270 | 707.04 | 1.8 |
| 2010 | 1032 | 704.29 | 1.47 |
| 2014 | 963 | 725.04 | 1.33 |
| **Bicyclist And Pedestrian Deaths As A Percentage Of Total Traffic Fatalities** | | | |
| 2012 | 7.5% | | |
| 2013 | 9.5% | | |
| 2014 | 9.8% | | |
| 2015 | 12.3% | | |
| **Percentage Of Fatalities Where Seat Belts Were Not Used** | | | |
| 2012 | 40.4% | | |
| 2013 | 36.6% | | |
| 2014 | 38.2% | | |
| 2015 | 35.7% | | |
| **Percentage Of Fatalities Involving Teen Drivers** | | | |
| 2012 | 11.5% | | |
| 2013 | 8.7% | | |
| 2014 | 10.7% | | |
| 2015 | 8.8% | | |

**Source:** *Tennessee Department of Safety and Homeland Security and Homeland Security; Research, Planning and Development, TITAN Database*

**Table C-2:** Traffic Fatality Numbers Per County

| County | 2012 | | 2013 | | 2014 | | 2015 | | 2016 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Fatalities | Serious Injuries | Fatalities | Serious Injuries | Fatalities | Serious Injuries | Fatalities | Serious Injuries | Fatalities | Serious Injuries |
| Anderson | 11 | 99 | 10 | 138 | 16 | 86 | 7 | 146 | 14 | 113 |
| Blount | 23 | 276 | 24 | 243 | 23 | 177 | 21 | 203 | 15 | 218 |
| Knox | 47 | 929 | 55 | 762 | 51 | 618 | 56 | 687 | 62 | 776 |
| Loudon | 4 | 208 | 7 | 142 | 10 | 177 | 6 | 197 | 9 | 187 |
| Sevier | 19 | 76 | 13 | 33 | 14 | 38 | 13 | 49 | 14 | 66 |
| Union | 3 | 48 | 3 | 27 | 5 | 35 | 4 | 15 | 4 | 12 |
| **Total** | **107** | **1636** | **112** | **1345** | **119** | **1131** | **107** | **1297** | **118** | **1372** |

**Source:** *Tennessee Department of Safety and Homeland Security and Homeland Security; Research, Planning and Development, TITAN Database*

**Table C-3:** Pedestrian Fatalities and Percent of Total Traffic Fatalities (U.S.)

| Year | Pedestrian Fatalities | Total Traffic Fatalities | Pedestrian Deaths as Percent of Total Traffic Fatalities |
|---|---|---|---|
| 2005 | 4892 | 43510 | 11% |
| 2010 | 4302 | 32999 | 13% |
| 2014 | 4884 | 32675 | 15% |
| **Source:** *Fatality Analysis Reporting System (FARS) 2004-2012 Final File, 2013 Annual Report File (ARF)* | | | |

**Table C-4:** Smart Trips - Greenhouse Gas Reduction

| Year | Lbs Of Greenhouse Gases Reduced |
|---|---|
| 2012 | 1,461,307 |
| 2013 | 1406157 |
| 2014 | 999236 |
| 2015 | 697,903 |
| Total | 4,564,603 |
| **Source:** *Smart Trips 2012-2015* | |

**Table C-5:** Residential Building Permit Activity

| Permits | 2002 | 2008 | 2015 |
|---|---|---|---|
| Anderson | 233 | 140 | 100 |
| Blount | 795 | 303 | 431 |
| Knox | 2,667 | 1,534 | 1,393 |
| Loudon | 389 | 242 | 279 |
| Roane | 145 | 126 | 72 |
| Sevier | 389 | 243 | 303 |
| Region | 4,908 | 2,738 | 2,748 |
| **Source:** *The Market Edge* | | | |
| **Average Annual Unit Additions, Knoxville Region** | | | |
| Pre-recession, 2002-2007 | 5,579 | | |
| Recession, 2008-2012 | 1,865 | | |
| Post-recession, 2013-2015 | 2,419 | | |
| **Source:** *Knoxville-Knox County MPC* | | | |

**Table C-6:** Paved Greenway by Jurisdiction

| Jurisdiction | Paved Greenway Mileage |
|---|---|
| Knoxville | 49.3 |
| Farragut | 12.7 |
| Knox County (unincorporated) | 10.2 |
| **Knox County Total** | **72.2** |
| Alcoa/Maryville | 16.4 |
| Townsend | 9.0 |
| **Blount County Total** | **25.4** |
| Lenoir City | 1.8 |
| City of Loudon | 0.1 |
| **Loudon County Total** | **1.9** |
| Sevierville | 6.4 |
| Pigeon Forge | 4.0 |
| **Sevier County Total** | **10.4** |
| Oak Ridge | 8.8 |
| **Regional Total** | **118.7** |

**Source:** *Knoxville TPO*

# APPENDIX D
# COMMUNITY OUTREACH AND ENGAGEMENT
## Public Engagement

Community input is a major component of everything the TPO does. We strive to make learning about and getting involved in our planning efforts as convenient as possible.

Continuing this commitment to provide convenient and frequent opportunities to engage, the Mobility Plan 2040 update included many different ways to get involved in the planning process and learn more about the work of the TPO:

- 2015 State of Transportation in East Tennessee Annual Report
- Regional survey
- Online public surveys
- Interactive project map
- Mobility Advisory Committee
- Speaker series
- Pop up events
- Open houses

## 2015 State of Transportation in East Tennessee Annual Report

The 2015 State of Transportation in East Tennessee was the first edition of this report. The intent of the report is to provide an overview of our region's transportation system. It describes what the TPO does, the planning area we serve, and our key work products. It also provides an overview of strengths, challenges, and trends affecting the quality of life in our region. It served as a resource and as the baseline for Mobility Plan 2040.

# State of Transportation Survey

The TPO contracted with the University of Tennessee[1] for a survey of Anderson, Blount, Knox, Loudon, Roane, and Sevier residents. The survey, conducted between December 2015 and January 2016, focused on how well our region's current transportation system is meeting the needs of the public, priorities for the future, and the preferred method of revenue generation. Below are a few highlights from the survey. For a more detailed report visit www.knoxmobility.org.

## Needs of the Public

- 70 percent of respondents say improving traffic flow is a high priority.
- 72 percent say maintaining and fixing existing roads and bridges is a high priority.
- Expanding transit where it already exists was more important to those between the ages of 50 and 64.

## Priorities for the Future

- Maintaining and fixing roads and bridges was the highest priority.
- People with household incomes under $25K were more strongly in favor of increasing transit where it exists.
- Residents of Blount and Anderson counties were more strongly in favor of expanding transit where it does not exist.
- People between 18 and 34 years of age were more likely to support expanding greenway, sidewalk, and bike facilities.

## Preferred Method of Revenue Generation

- The most frequently selected sources for additional transportation funding were an increase in gas tax and transportation bond/borrowing.
- However, almost one out of four respondents indicated they would not support any type of additional funding.

## Active Forms of Transportation and Recreation Appear to be Growing

- 40 percent of respondents have ridden a bicycle for recreation in the past year.
- 15 percent have used a bicycle for transportation.
- 56 percent of respondents have used a greenway in the past year.

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1 UT's College of Social Work Center for Applied Research and Evaluation - A mixed-mode methodology was used and included telephone surveys utilizing random digit dialing (RDD) landline telephone sample, cell phone sample, and a web survey using a web panel purchased from Survey Sampling, Inc. The sample included at least 300 surveys from each of Anderson, Blount, Knox and Sevier counties, and 300 from Loudon and Roane counties combined. A total of 1,608 surveys were completed: 728 from landline sample, 530 from cell phone sample, and 350 from the web panel. The survey results have a +/- 2.4% margin of error at the 95% confidence level for the region and +/- 5.6% margin of error at the 95% confidence level for each of the counties.

# Online Engagement

The TPO conducted three online surveys during the Mobility Plan process. The first online survey was available February- July 2016 and had nearly 600 responses. The survey questions mirrored questions we asked of our Mobility Advisory Committee and the TPO Technical Committee to help develop the project selection criteria process. Survey results start on p. D4.

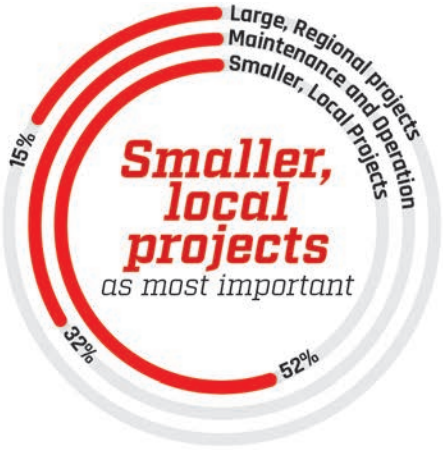
The second survey was open April - May 2016, and was designed to gather specific project ideas. Survey results start on

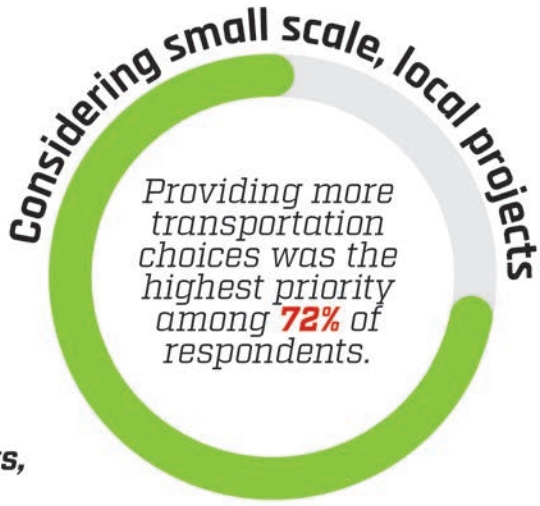
The third online survey was open February - March 2017 and was designed to match a public input handout available at TPO booths (see p. D32 for details on booth outreach). The handout was also available in Spanish. Survey results start on p. D17.

# Mobility Plan 2040 Survey 1 – Developing Selection Criteria Process

*Survey available between Feb and Jul 2016. There were 594 complete responses.*

**Which of these is the most important? Choose one.**



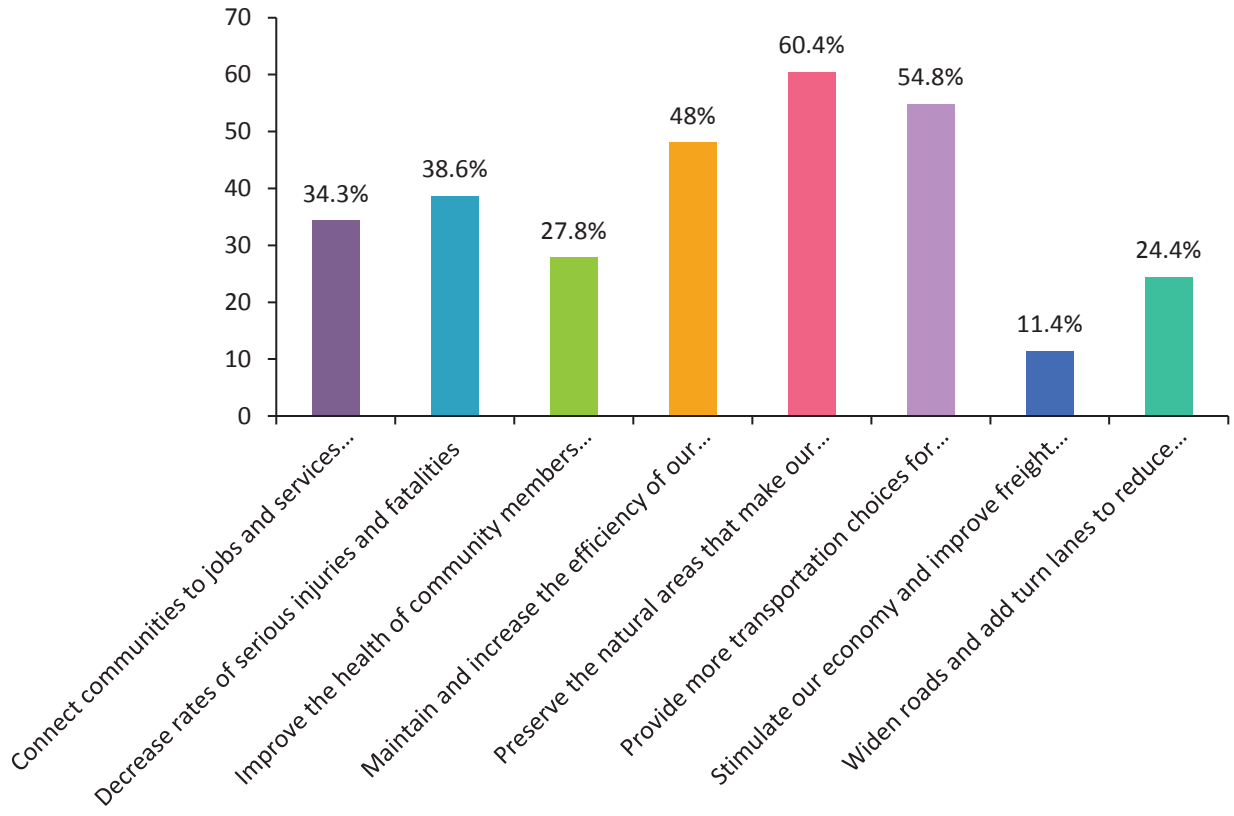


**Please rank these types of projects, with 1 being the most important and 8 being the least important.**

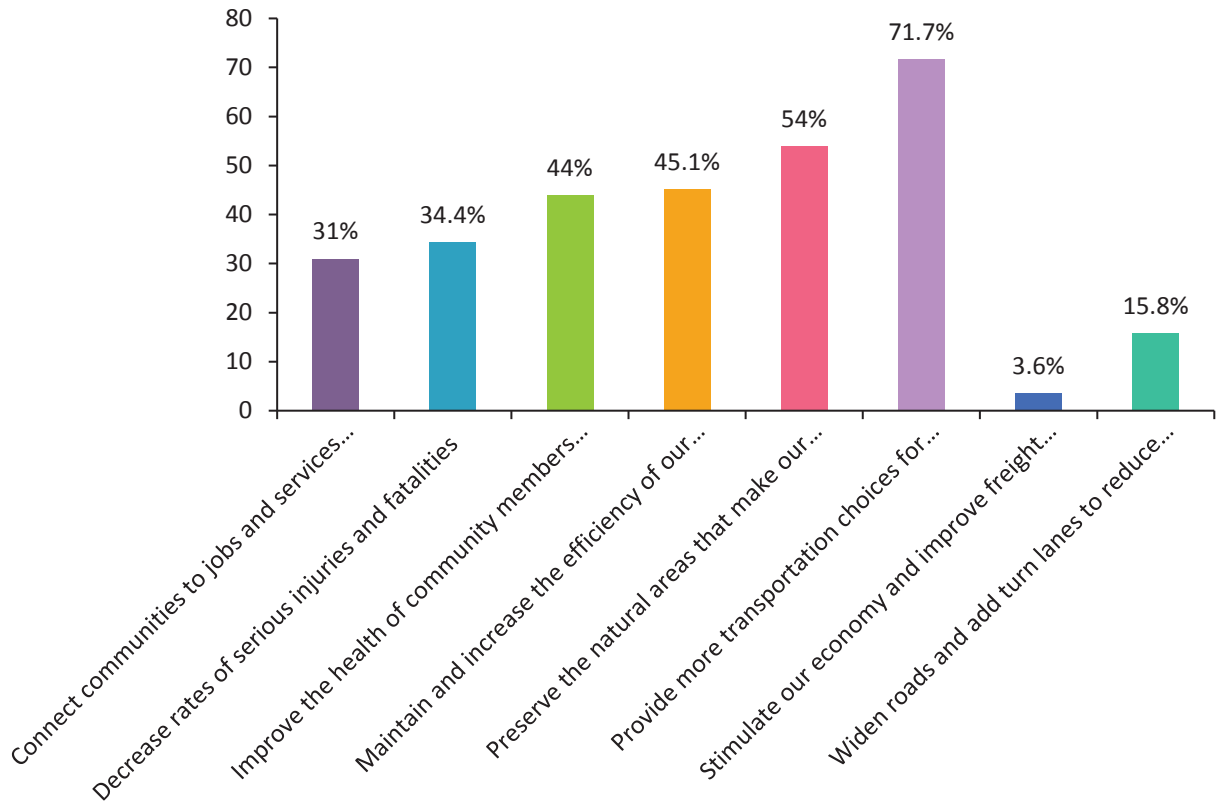
| Overall Rank | Item | Score | Total Respondents |
|---|---|---|---|
| 1 | Sidewalks, greenways, and bicycle lanes | 3,412 | 552 |
| 2 | Maintenance of roads and bridges | 3,208 | 547 |
| 3 | Technology to improve traffic flow | 2,749 | 545 |
| 4 | Neighborhood traffic safety | 2,655 | 544 |
| 5 | Expand transit to areas currently without service | 2,505 | 547 |

| | | | |
|---|---|---|---|
| 6 | Increase transit service where it already exists | 2,096 | 546 |
| 7 | Widened roads to reduce congestion | 2,007 | 540 |
| 8 | Build new roads | 1,172 | 538 |

**Consider projects that are regional and large in scale (e.g. Alcoa Highway; Pellissippi Parkway). Which three of the following factors should be the most important when evaluating large, regional projects? Choose only 3.**



Now, consider smaller scale, local projects (e.g. intersection improvement, streetscaping, new sidewalk). Which are the three most important factors when evaluating smaller, local projects? Choose only 3.



# Mobility Plan 2040 Survey 2: Transportation Priorities

*Survey available between Apr and May 2016. There were 45 complete responses.*

What are the top three transportation opportunities or concerns in your community? Community can be defined in many ways (your neighborhood, your city, your county, the region, etc.). Please be as specific as possible by providing the cross streets or a description of the location of your concerns in your community.

| |
|---|
| 1. All existing and new arterial roads in Maryville should have a sidewalk and a bike lane in order provide safe access by pedestrians to schools, shopping areas and neighborhoods. 2. Maryville needs a plan to install safe roadway crossings at major intersections, particularly around schools and public buildings. 3. Maryville needs to promote and encourage Active Transportation by making the roads safe for pedestrians and bikes. |
| Need to wide E.Broadway in Maryville to create a center turn lane. This road is a major north/south artery in Maryville and one leading to terminus of I-140. Need improvements to 411N to create shoulders. This is a heavily-traveled road with culverts on either side. Need to improve Morganton Rd in Blount Co. Heavily traveled. |
| 1) Concern of money being spent on new roads when there is barely enough to maintain current roads. Maintaining includes providing enough law enforcement to keep roads safe. Blount county has one of the highest fatality rates caused by speeding and DUI. Six members of one family were killed in an accident on US 411 South, an IMPROVED ROAD with little enforcement. 2) In Blount County, TDOT is wasting millions on the PPE which by its own EIS will not provide any improvement and is in a quadrant of the county that has the least traffic problems. There are much greater needs as in the western half of the county. An example is US321's intersections with Alcoa By-pass and Foothills Mall Dr. This area is highly congested. 3) TDOT is not progressive enough in transportation design. Beltways or loops around cities don't work, they only induce traffic. Improve what you have, don't build unnecessary monuments. TDOT does studies, such as streetscape design, a community enhancing i |
| 1)enforcing speed limits (out by Heritage High School and beyond to Townsend!) 2)bike lanes on more heavily traveled roads and 3)widening Sevierville Rd (411) N to Sevier Co. NOT building another parkway or extension of Pellissippi |
| 1. Back-up of traffic on StRt 33 (Old Knoxville Highway) during rush hours where traffic comes in from Pellissippi and Old Knoxville Highway and Clayton Drive 2.Increased traffic at high speed on Sam Houston School Rd. 3. Alcoa Highway is a race track. |

| |
|---|
| 1. Our neighborhood's safe pedestrian or biking access to grocery stores and nearby businesses. The 100's (1000's?) of people in the neighborhoods in Maryville and Alcoa on either side of east Lincoln from Everett High road to Broadway at the food city shopping center having no safe Routes to access the numerous businesses within easy walking distance. Having lived here for 35 years, I see people almost daily wading the weeds along Lincoln to get the food city shopping center. The bike lane The bike lane along Lincoln from third street to aluminum Avenue is heavily used, but very unsafe being so narrow and separated from traffic by only a line of paint. 2. The lack of shoulders on Highway 411 in all of Blount County especially the heavily traveled part between Everett high road and peppermint Road is extremely dangerous. If someone crosses the centerline the only way to avoid a head-on is to roll your car in the deep ditch. (Our friend has permanent disabilities from |
| 1. Residential and commercial development occurs in Blount County with little planning for transportation impact and transportation alternatives. Limited "fixes" come after the problems develop. 2. In general, it is not safe for Blount County residents and students to walk or ride bicycles to school, to Greenbelt, to parks or to businesses. 3. A specific area of concern is the lack of sidewalks, shoulders or bike lanes and poor sight lines on Sevierville Road/US411N. This is unsafe for drivers and impossible for cyclists or pedestrians. Even within a mile or two of downtown it is unsafe to walk or cycle. |
| 1. Unsafe Alcoa Highway. US129 between the Tennessee River in Knox County and Knoxville Airport in Blount County is often congested and nearly always unsafe because of overmuch unplanned commercial development. 2. Sevierville Road/US411N in Blount County between Maryville & Seymour. This winding 2-lane without shoulders has become unsafe for drivers and impossible for bicycles & pedestrians. It will be difficult to improve because of recent decades of unplanned residential development. 3. Blount County residents have no safe way to walk or bike to schools, parks, or businesses. Also no public mass transit. |
| 1. We need more walking/biking trails beside roads. It is impossible to walk or bike in many areas where it would otherwise be feasible and desirable. 2. We need traffic calming devices, such as curb extensions, center islands, raised crosswalks or the like for pedestrian and bike crossings. 3.We need a comprehensive, coordinated plan for adding pedestrian walkways throughout Alcoa, Maryville, and Blount County. New development should be required to provide sidewalks that will connect out to public walkways. |
| 1. 2011 commuter flow maps show the heaviest commutes flows are between Anderson and Knox, Blount and Knox counties. Interstate congestion between Pellissippi and Alcoa Hwy. 2. Hardin Valley exit congestion off Pellissippi Pkwy (north/west bound) causes traffic to back up for .25 miles during peak traffic times. |
| 1. Bike highways. *Protected* bike lane network connecting residential and work areas. In my neighborhood that would mean on Cumberland, Gay Street, Central, and Magnolia. All connected to downtown. 2. Covered bus/trolley stops with route info. Digital "time to next bus" indicators too. Make it easier and more comfortable to ride a bus. 3. I don't have a third big idea. Express trains to Florida? |

| |
|---|
| 1. For 30 years I drove Alcoa highway to UT, part of the time carpooling, but often driving alone. Commuters need alternatives. 2. My brother lives on Hudson street in Maryville. He's retired and prefers to walk to the very close grocery stores and businesses, but there is no safe way for him to walk along or across the roads. |
| 1. Island Home Ave is not safe for pedestrians or bikers. There is neither a sidewalk nor a shoulder on the road between South Haven Rd and Fisher Place. I cannot safely walk to the nearest bus stop (Route 40, Fisher Place) or Greenway (Will Skelton Greenway) because of the narrowness of Island Home Ave, the poor visibility around its curve (just west of Fisher Place), and its high level of traffic. 2. Traffic on Island Home Ave is far too heavy and fast for its narrow lanes. Drivers consistently exceed the speed limit along the road. This includes many speeding oversized vehicles (especially the massive oil trucks that daily drive to and from the oil reserve facility east of Ijams Nature Center) that consistently travel down our road despite being too large. When traffic volume is high I often feel unsafe walking in my front yard. 3. The railroad crossing at the intersection of Island Home Ave and Aultman Rd does not have railroad crossing gates. I am originally from a city tha |
| 1. Lack of Greenways, bikeways, walkways West of Northshort and South of Kingston Pike 2. Lack of good transit nearly everywhere in Knoxville City 3. Transportation too car centered. inefficient and polluting |
| 1. No pedestrian or bicycle options in Downtown Maryville or around Maryville city schools . 2. Alcoa Highway congestion 3. Alternate routes from Maryville to Knoxville are limited. |
| 1. Straight, decent line of sight road from Greeneville, TN to Nolichucky River. 2. Straight, decent line of sight road from Gray to US 11E W of Greeneville 3. Straight shot from 19E & 11E to TCRAirport |
| 1. The lack of sidewalks, shoulders or bike lanes and poor sight lines on Sevierville Road/US411N. This is unsafe for drivers and impossible for cyclists or walking. Even within a mile or two of downtown it is unsafe to walk or cycle. 2. Traffic backs up on Sam Houston Schoolhouse Road and Williams Mill Road at beginning and ending of the school day because there are no turn lanes; unsafe passing on shoulders. 3. Residential and commercial development occurs in Blount County with little planning for transportation impact and transportation alternatives. Limited "fixes" come after the problems develop. |
| 1.Transportation for those who can't drive 2.Public transportation system 3.Reducing impact of transportation on the environment |
| Alcoa Highway improvments |
| Cycling lanes and sidewalks. Specifically on Parkside to connect Farragut to downtown |
| Improve existing roads instead of building new ones (No Pellissippi extension). Create and improve bike and pedestrian lanes/sidewalks -- we have a beautiful town but no way to get around it other than by car. Provide more guidelines for development that preserve the rural qualities -- preserve farm and wildland, limit commercial growth to specific areas, reduce light and noise pollution, have building codes (like Townsend). |
| Improvements to Alcoa Highway |

| |
|---|
| Intersection crossing east Broadway and MacArthur after passing the traffic light, the road dead ends in a hazardous |
| Knoxville needs more frequency for KAT routes and some type of bus lanes so the buses go faster. This will make people want to ride buses. Make it easier so we can ride. |
| Morganton Road. From WM Blount clear to Greenback. Road is too narrow, not shoulders. Many wrecks, more traffic than the road, in its present condition, can handle. Also, a need for elderly transportation. Mini metro buses to transport to grocery stores, or doctors. |
| Most of what the City of Knoxville and Knox County, TN needs are bike lanes. They are slowly increasing them in areas where oversized roads can be "dieted" to include a bike lane (Such as Sevier Ave in South Knoxville). Biking would be more convenient if the major roads were more accessible with the addition of bike lanes, improving very rough and unmaintaned "greenways" and connecting these lanes/greenways to where they do not spontaneously end. Examples include Western ave and Middlebrook Pike for getting in and out of the downtown and the neighboorhood branching off those roads. |
| My neighborhood is between Montvale and Court, near Maryville College. There are lots of kids in the area who could walk to the nearby schools (elem, Jr High, and High), but there are not good sidewalks and places to cross. Montvale only has a sidewalk on one side. I wish it had a safer sidewalk on both sides. It would be good to have more connections to the schools and greenways. There's a little railroad bed between Montvale and the Jr High. It's a dirt path now, with poison ivy. Would be nice to widen and pave it. |
| Narrowness of Morganton Road from Foot Hill Blvd Access to transportation from those who can no longer drive themselves |
| Poor traffic flow on Old Knoxville Hwy at Pellissippi Parkway. Lack of bike lanes and access to greenway trails. Ignoring other solutions to traffic issues, such as widening existing lanes or adding a center turn lane on Old Broadway. |
| Public transportation linking Maryville and Knoxville. Shuttle linking McGhee Tyson Airport with Nashville and Atlanta. Crosswalks, sidewalks, and links to encourage walking and biking. |
| Sevierville Road / HWY 411, no shoulder, heavy traffic Alcoa Hwy - unsafe in all manners no sidewalks |
| Sidewalks and safe crossing of North Broadway in Fountain City, especially near the park on Hotel Ave. Sidewalks or greenway along Adair to provide more access to the park. Extended greenway and connections in Fountain City. |
| Sidewalks in Maryville should be available on Sevierville Road, Lamar Alexander, Broadway, and Montvale Road from one end of town to the other. |

There are a lot of new bike lanes being put in around downtown Knoxville which is wonderful but a lot of them need to be buffered due to heavy traffic flow on many of the streets the bike lanes are on. I am talking about actual barriers and not just paint. For example, on Henley Street Bridge and the bike lane on Clinch Ave by World's Fair Park. The bike lanes also commonly have glass/debris which is dangerous for cyclists. These should be cleaned regularly by the city or sponsoring entity. Cumberland Avenue by UT that is undergoing reconstruction right now should have also been redesigned to include bike lanes as that is a main thoroughfare and I am very upset that bike lanes were not included in the final design. Knoxville needs better/more bike lanes in general especially to get out towards West Knox to Papermill Road where REI and Whole Foods are and protected bike lanes on Sutherland Avenue.There also need to be covered bus stops and benches at bus stops so people do not have to s

There is NO public transportation between Knoxville and Maryville. The traffic is horrible and growing. Add light rail and small bus service that is fast and flexible. For a city/region the size of Knoxville public and alternative transportation is deplorable and needs to explode to keep pace and to lead.

Top Concern is safety along existing roads, Blount County, based on accident frequency or injuries. Next would be keeping inebriated or drugged drivers off the roads. Third is better shoulders on two lane roads.

We have to use technology to improve traffic flow in Maryville. Improve the roads we have, don't waste taxpayer money on nonsense like extending the Pellissippi Parkway extension...just look at our current infrastructure and improve it,

We need a way for bicycles to get from Court street to Windsor street safely.

a. The problems trying to ride a bicycle or walk for exercise outside of the city of Maryville. To use the greenbelt in downtown, county residents have to drive into the city. Measures must be taken to make Blount County more bicycle and walking friendly. b. Many of he traffic problems in the city of Maryville and Blount County occur because of poor planning for traffic around the schools. Residents who have to travel through the school traffic spend way too much time in traffic leading to pollution problems and excess fuel consumption. c. Specific problems occur on 411 South, 411 N (Sevierville Road) where, even if one wanted to ride a bike into the countryside outside the city, ou cannot because of the width of the pavement and the steep shoulders. d. I have traveled 321 toward the mountains, but the stupid storm drain covers are placed parallel to the bike tires so one has to move into the outside lanes to avoid trapping your tires in the drain covers.

bike lanes on Chapman Hwy, sidewalks in residential areas, crosswalks on Chapman Hwy.

distracted driving makes it unsafe for bicycling and walking speeding - safety issue esp for bicyclists and pedestrians lack of transit other than in Knoxville

preserving our most valuable resource, our environment and scenic beauty. this should be top of mind because when this goes, it is gone forever.

Identify up to three projects or programs that would meet one or more the transportation opportunities or concerns you identified in the previous question. Again, please be as specific as possible regarding the following: What specific transportation improvement or program should be put into place? What opportunity or concern does it would address? What is the specific location for the program or improvement, if applicable?

| |
|---|
| 1. All new and existing transportation projects should follow the Complete Streets program, that serve the needs of all transportation modes. 2. Following the Complete Streets model would encourage robust infrastructure for bicycling and walking while reducing the potential adverse effects of motor vehicle travel. 3. Maryville should adopt a Complete Streets plan for the entire length of West and East Broadway, the main corridor that runs through our town. |
| 1) Increase enforcement funding. 2) The ten-year-old Hunter's Interest study commissioned by Blount County identified several local road improvements that would help traffic flow. None of these have been implemented. 3) Follow through with streetscape plan for Hall Rd./ Washington St. |
| 1. Build crosswalks and a pedestrian trail along Court St. in Maryville going from downtown toward the college and past it. It could be connected to the College Woods trail and to neighborhoods and subdivisions along Court St. This is an area that is densely populated with a variety of potential users, including many children, students, and retirees. To cross Court Street at Stanley Ave and Court St. would be an ideal location for a crosswalk. Traffic calming devices would also be needed, such as curb extensions. 2. Montvale Rd. needs wider sidewalks all along the road, preferably set back from traffic with a landscaped strip, to connect neighborhoods with schools. From Mountain View Ave. to Montvale Station Rd. an adequate and safe pedestrian/bike trail or wide sidewalk should be constructed. A crosswalk at Montvale Rd. and Wilson Ave., or Montvale Rd. and Indiana Ave., is needed also. 3. A north/south greenway connector between the Pistol Creek section near the Courtho |
| 1. Institute a comprehensive approach to development and transportation that includes requirements for sidewalks, bike lanes, and safe routes to schools. 2. Prioritize linkage of Blount County residents to the Greenbelt through sidewalks and bike lanes to schools. Transportation alternatives are a high priority among county residents for health and recreation. 3. Add shoulders, sidewalks and bike lanes on Sevierville Road/US411N for community health, transportation alternatives and safety. Require sidewalks and bike lanes for all road projects and new residential developments. |
| 1. Making foot paths and bike trails along Lincoln, preferably separated from the traffic by more than a strip of paint would be marvelous for improving the quality of life for the people in our neighborhoods, and cut down on short car trips, and give people an opportunity to exercise. 2. Purchasing right-of-way or using current right-of-way, if it is there, to make shoulders along 411 would be helpful in reducing the number of serious crashes and accidents along that very dangerous road. 3.somebody would need to be creative to figure out safe pedestrian or biking routes to the shopping areas of foothills mall and the food city near the blount farmers co-op and for the people who live in the apartment buildings and also the neighborhood between Broadway and Lamar Alexander Parkway ( sunrise Neighborhood?) Oak Park neighborhood folks would also benefit from foot for bike access to those shopping areas. |

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| 1. Work has now finally begun to widen Alcoa Highway and improve safety. Thoughtful forward planning (such projects as business access roads) when new highways are built would eliminate a lot of future suffering. 2. Add shoulders to Sevierville Road! Also, where practical, add an extra lane, and bike lanes, and sidewalks. For all future road projects and new residential developments, require not only shoulders for safety, but also sidewalks and bike lanes. 3. Improve Blount County linkages to Greenbelt and local schools through sidewalks and bike lanes. Re-establish bus service between Alcoa-Maryville and Knoxville, and perhaps elsewhere in Blount County. |
| 1. Add shoulders, sidewalks and bike lanes for community health, transportation alternatives and safety. Require sidewalks and bike lanes for all road projects and new residential developments. 2. Add turn lanes or access roads to every school location, to East Broadway/US321 and to all new commercial development and to entrances to residential developments. This will reduce congestion, improve air quality and safety. 3. Institute a comprehensive approach to development and transportation that includes requirements for sidewalks, bike lanes, and safe routes to schools. |
| 1. Consider a light rail system or other mass transit system between Oak Ridge and Knoxville; West Knoxville and UT/downtown; Knoxville and TYS Airport/Maryville. 2. Re-design of Hardin Valley exit to accommodate peak traffic flow. |
| 1. I believe that building either sidewalks or shoulders on Island Home Ave between South Haven Rd and Fisher Pl would be ideal to solve walk- and bikeability in my neighborhood. I realize that this may not be feasible since many homes on the south side of Island Home Ave are very close to the road and a steep hill abuts the street from the north side. I assume, however, that the road eventually needs to be widened since the road is officially classified as a Minor Collector and the two lanes are quite narrow. Another possible solution would be to create incentives for Island Home Pike drivers to pursue southbound routes towards Gov. John Sevier Highway or Sevierville Pike, such as reducing Island Home Ave to one-way traffic (say, eastbound) between South Haven Rd and Fisher Pl, thus encouraging westbound drivers to either travel slowly through the labyrinthine Island Home Park Neighborhood or simply find a different route to Sevierville Pike/Moody Ave. Many young people, including my |
| 1. Improvements to roadscapes that would allow for all modes of transportation. 2. Alcoa Hwy Parkway/widening 3. Topside Road and Old Knoxville highway improvements. |
| 1. Much improved transit. There should be a way to get from West Knoxville to UT and downtown in 15 minutes. 2. Much improved bicycle and pedestrian possibilities, removed from traffic. 3. Bring intercity passenger rail back to Knoxville |
| 1. Rapid transit (trains or buses) between Blount county and Knoxville, with good connections to parts of Knoxville and Blount county. 2. decrease in road traffic. |

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| 1. There needs to be an alternative to driving on Alcoa highway, currently there is no service as an alternative. Continuing to expand Alcoa highway or building another parallel road is only a solution that will bring more traffic. We need a bus system or a way to encourage carpooling. 2. Sidewalks need to be provided for pedestrians walking to and from their convenient shopping areas. With our area being marketed as a good retirement location there needs to be safe ways for them to get around other than by car. Many of these people no longer drive, or shouldn't be. Many people who have moved here in retirement are surprised and disappointed that we have to transportation services. |
| Bike lanes or greenways along traveled roads for commuters. |
| Build sidewalks. |
| Changes are needed across the entire Aloca Highway corridor. This should be the areas top priority to fund and complete before any other projects are put on the table. |
| Complete Pellissippi parkway, Require children to ride the school bus!!! |
| Continue improving accessibility on Alcoa highway. Improve visibility at intersections. |
| Electric rail from the University /downtown to Cades Cove in the SMNP. Make it fast cheap and efficient and people will use it. It would cut down on pollution in the area and mountains, cut the need for expensive highways and serve as a tourist draw if done as a scenic railroad. Elevate it over the highway 129 so right of way doesn't have to be gained. Include a bike bath in the structure. Add solar roadway to the area and on bike paths Alcoa Highway needs to be redesigned for safety and efficiency. Simply adding turn lanes isn't enough with the growth in the area |
| Extend sidewalks! For public health and transportation. Montvale road. Safe route for kids means less parents driving them to school, and less traffic. Another safe crossing for Montvale. Sidewalks on both sides of Montvale, extended to more neighborhoods surrounding the schools. |
| Incorporate progressive urban planning that reduces traffic congestion and increases bike and pedestrian lanes, without increasing sprawl and noise and light pollution. Let's improve the efficiency of what we have, rather than add poorly planned routes and developments. |
| Increased walk-ability in the suburbs. Allows young families access to parks, schools, etc. |
| Installing bike lanes throughout the city and county, but dieting roads and replacing steep ditches with shoulder/curb&gutter. Resurfacing existing greenways so they are road bike friendly, and extending greenways/sidewalks along entire corridors. |
| It would be good to put a bike path in the woods across Maryville College land to accomplish the above need. |
| Light rail from Alcoa Airport to Transportation Hub in Knoxville. |

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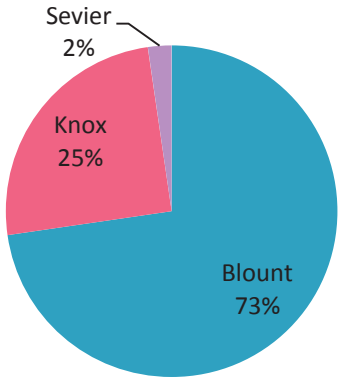
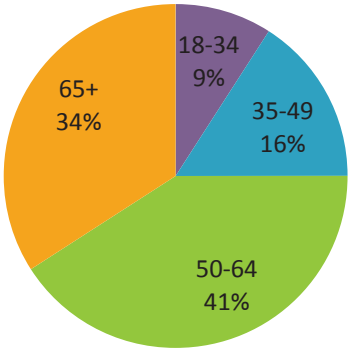
| Light rail from Maryville to Knoxville using the train tracks. Could be used for daily work or university commuters as well as those going to sporting or other events. It would help decrease traffic density on Alcoa Hwy and lower air emissions as well as keeping tired or drinking people from being behind the wheel. Shuttle from the area to Nashville and Atlanta airports. Many travelers use these larger airports and providing a shuttle would again keep tired travelers from driving. Add walking and biking lanes. Stop widening roads -- they are too hard to cross and isolate neighborhoods. For example, the College Hills neighborhood is an island. There needs to be sidewalks down the East side of Montvale Rd and crosswalks midway near Indiana, Wilson or Waller so that children can cross Montvale to get to school (Sam Houston elementry, Maryville High school, and Maryville Jr High). Also lights or other visual indicstors for drivers to stop when people are trying to use the crosswal |
| Maintain or upgrade existing roads; Do not waste precious limited funds on new roads example: extending the Pellissippi Parkway; instead fix Sevierville Road and Alcoa Highway |
| More technology based traffic flow...cant have let's build and see what happens. No money for that. Traffic in West Maryville more of a problem than any area where new road construction is even being discussed. Hard to say where exactly, but from Wal Mart to Foothills Mall we need to improve traffic flow. |
| Police patrols out on 321 toward Townsend Putting the money formerly designated for extending Pelliss. Pkwy toward widening 411 (between Maryville and Sevier Co.- Chapman Hwy!) |
| Start with Mortganton Rd., others based on availabe incident rates. |
| The bike lanes on Gay Street bridge and on Sevier Ave are nice though it would be better if the bikes lanes on Gay were buffered. |
| When self driving cars are available both #1 and #2 could be taken care of at the same time by making a plan of locating several nodes of self-driving cares at different points throughout the county after careful study. |
| Widen East Broadway and add a center turn lane. Connect existing greenway trails around Hunt Road and Old Knox Hwy. Cancel PP extension project and improve surface roads instead. |
| Widen Morganton Rd from Foothill Mall road, clear along Morganton all the way to Greenback. Provide shoulders the whole distance. Road too narrow with only ditches on each side. Elderly, who can no longer drive, needs a way to obtain food, meds. medical care. |
| Widening Morganton Road An on-call cab-like service for those no longer able to dive themselves |
| a. Add shoulders without steep drop-offs, sidewalks, and bike lanes where possible to encourage citizens to travel short distances with a minimal environmental impact while improving their health. b. Look at the school traffic around the Blount County and city schools to improve traffic flow (add turn lanes or increase the length of turn lanes) c. Make entrance into the city easier for citizens who live just outside the city of Maryville and Alcoa city limits by adding bike lanes, sidewalks, and adequate shoulders on main roads into the cities (for example US411N). |
| expand transit to Knox County more money for sidewalks, esp gaps in the network require sidewalks in new developments |

If you would like us to follow up with you regarding your suggestions please include your contact information below. You can also contact your local government representative directly with your ideas. A list of local government representatives serving on the TPO Technical Committee members can be found here.

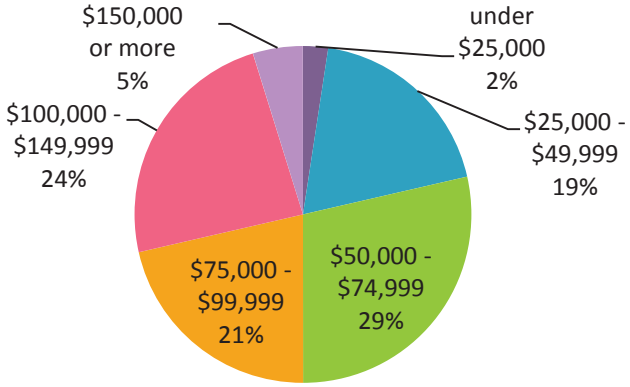
## What county do you live in?




## How old are you?




## What is your average yearly household income?



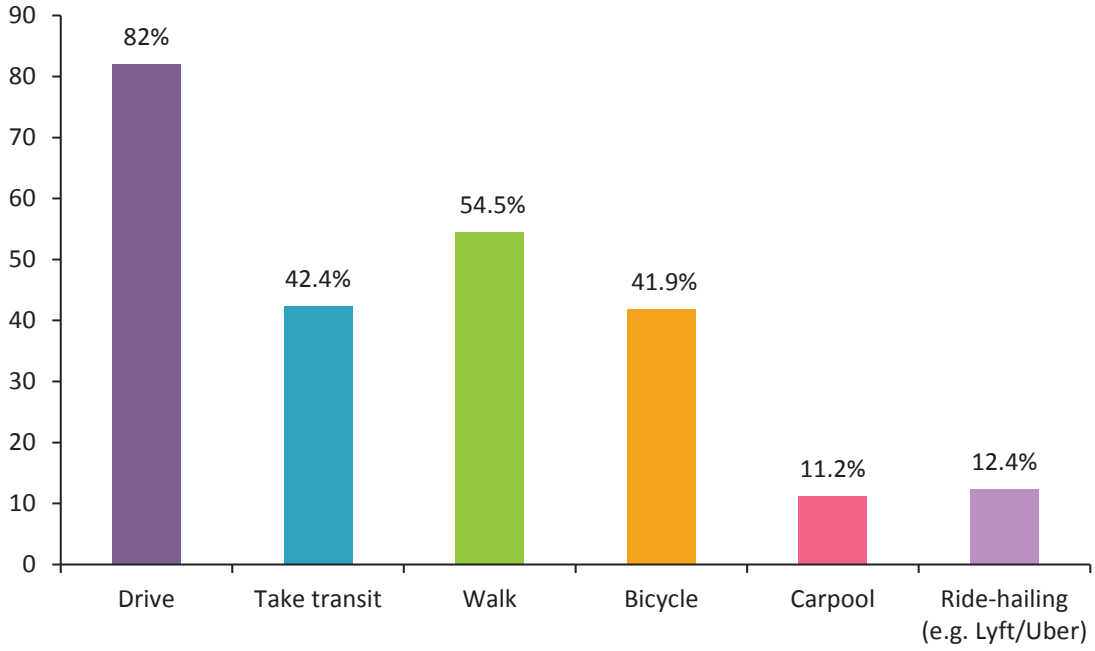

## What is your zip code?

| Count | Response |
|---|---|
| 10 | 37803 |
| 10 | 37804 |
| 4 | 37853 |
| 3 | 37701 |
| 2 | 37742 |
| 2 | 37801 |
| 2 | 37917 |
| 2 | 37920 |
| 1 | 37604 |
| 1 | 37878 |
| 1 | 37902 |
| 1 | 37909 |
| 1 | 37912 |
| 1 | 37918 |
| 1 | 37919 |
| 1 | 37932 |
| 1 | 37934 |

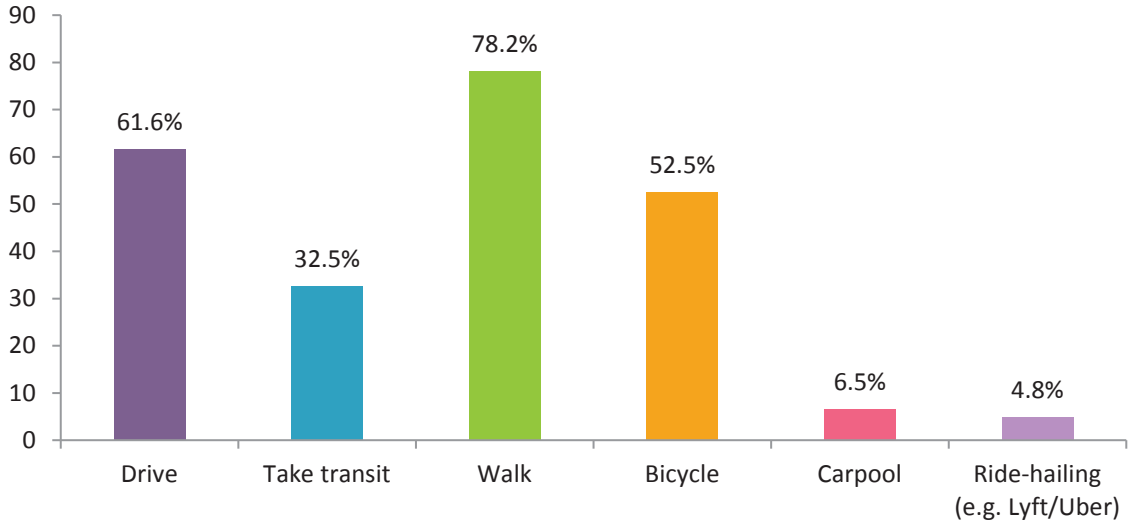
# Mobility Plan 2040 Survey 3 – Reviewing the Draft Priorities

*Survey available between Feb 6 and Mar 23, 2017. There were 356 complete responses.*

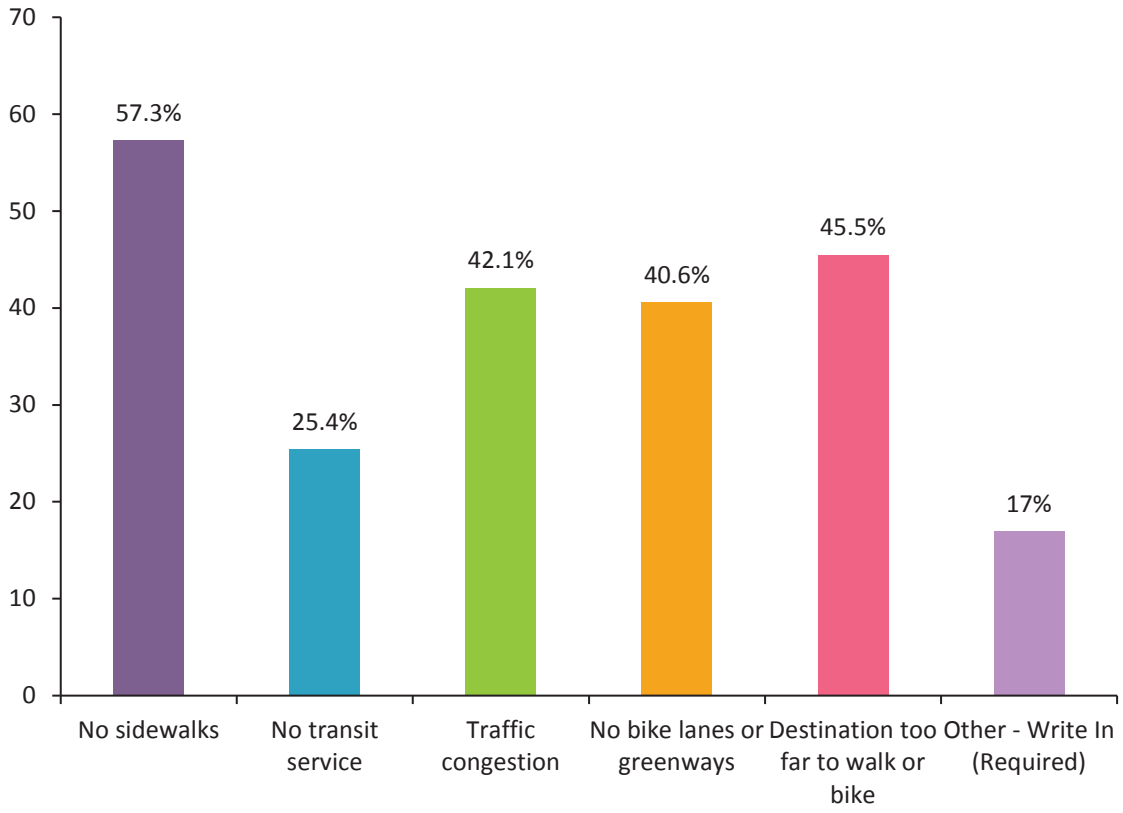
**How do you want to travel around the region (for work, school, errands) over the next 20 years? Check all that apply.**




**What about around your neighborhood/community? Check all that apply.**



**What problems do you face now in reaching your daily destinations (work, school, shopping, etc)?**




| *Other - Write In* | *# of responses* |
|---|---|
| Need more transit, more frequent service, and longer hours of service (early morning, late night, and Sundays) | 12 |
| Need sidewalks, and destinations within walking distance | 5 |
| Traffic signals need to be better timed/coordinated | 4 |
| Road construction | 3 |
| Lack of bike lanes, especially protected bike lanes | 2 |
| Crossing wide highways and intersections as a pedestrian is unsafe | 2 |
| safety/street crime | 2 |
| Dangerous roads | 2 |
| Disabled | 2 |

| | |
|---|---|
| Don't add subdivisions before adding infrastructure to support them. Widen roads before adding neighborhoods.  Don't connect large roads like 321 to small congested roads like Morganton Road. | 1 |
| Better curb/sidewalk access. | 1 |
| Bike lanes need sweeping | 1 |
| Improved bus pickups for children | 1 |
| Aggressive drivers | 1 |
| No covered bus stops or seats | 1 |
| Parking | 1 |
| Poor road conditions and inadequate safety measures. | 1 |
| I don't know how to use public transport | 1 |
| Sidewalk obstructions | 1 |
| Speed limits too low | 1 |
| Wide roads with fast traffic that cut through downtown Knoxville. | 1 |
| Drivers go too fast | 1 |
| physical barriers (big, scary roads) and hills! | 1 |
| roads need fixing | 1 |
| Adjusting my travel time and route based upon what time I choose to leave. That makes me in charge of my travel and not the government and unelected bodies. | 1 |

## What is the biggest challenge our region is facing?

| *Response* | *# of responses* |
|---|---|
| Lack of greenways, sidewalks, and bike lanes | 67 |
| Lack of public transit | 40 |
| Sprawl/auto-centric development patterns that make it unsafe to walk or bicycle | 26 |
| Traffic congestion, mostly due to growth in areas without sufficient infrastructure | 24 |
| Lack of maintenance | 6 |
| Can’t walk because of personal safety concerns | 4 |
| Unknown future that driverless cars will bring | 2 |
| 2 lane roads with new housing going in which will bring more traffic then already experiencing, specifically Morganton Road | |
| Alcoa highway fix with limited access or direct traffic to alternative routes. Finish Pellissippi | |
| Bike lanes over drivers' needs | |
| Bike paths/greenways/sidewalks aren't planned with thought towards actual transportation. They are great for exercise and recreation, but can be difficult to navigate for running errands etc. | |
| Bus stops are too far apart.  Facilities, greenways, and public transport need to be more obvious/clear to users; the web isn't easy to use. | |
| Chapman Highway needs some relief.  Expand James White | |
| Chapman highway is still very dangerous, especially during rush hour or turning left. There are not enough shoulders/safe places to walk, especially around Sevierville Pike | |
| Widen Chapman Highway or add middle lane. | |
| Connecting affordable housing with places of employment (and schools/services) through a variety of practical transportation modes is a huge challenge that must be addressed. I believe a variety of regulatory and incentive-driven options need to be explored and implemented before the crisis becomes worse. | |
| Corrupt Politicians.  Start by voting out every single person who holds any office currently. | |
| Cultural stubbornness and a really obstinate State Government who hate what public transit represents. First, campaign to vote out anyone responsible for the Nashville busing conflict in 2015. Second, only zone commercial development within one mile of a bus route. | |

| | |
|---|---|
| Getting transportation options connected across jurisdictions. Need leadership in this regard. | |
| I have been in the East Knoxville/Magnolia Corridor for over 20 years. The economic depravity and challenges in that area aren't addressed in the concept for the Bicycle/Walking Friendly Communities. | |
| It's convincing the residents of our community that alternative means of transportation, like bicycling, contribute to the well-being of our community. Building bigger roads with more shoulders would help, but until attitudes are changed, it's still hard to use a bike as a viable means of transportation or economic value for the community. | |
| I am a recent UT graduate and young professional and Knoxville is failing to retain workers like me. In order to capitalize on the valuable worker factory in our backyard that is the flagship state university, Knoxville must focus on meeting and surpassing the competitive livability standards set by our surrounding metros. Chattanooga, with its walkable urban blocks and protected bike lanes on major thoroughfares, is a prime example of a similarly sized city which is eating our lunch at the moment. I believe that we can better retain skilled college graduates by expanding our sidewalk and greenway system, while loosening zoning regulations to better allow mixed use commercial/residential zoning and high density housing. Pedestrian friendliness, in addition to increased public spaces and urban parks, will lead to a better sense of community and communal accountability while increasing the vibrancy of Knoxville's neighborhoods (think of a pedestrian-friendly Bearden or Happy Holler). | |
| I have noticed in South Knoxville (in particular Sevier Ave.) While walking my son to school, there are MANY used syringes and things of that nature just lying on the sidewalks. Our kids could pick those things up. Maybe a voluntary clean-up initiative. | |
| Inadequate safety measures on major roads and ignorance of reasonable solutions. | |
| It is harder for disabled people to get to transit stops. Also make it free for 55 and older again. Also add free for our Veterans as well. | |
| Lack of affordable housing on transit lines and near employment centers. | |
| Lack of funding for infrastructure projects. | |
| Major barriers and over engineering have created large disconnects within the city. Working to reconnect North Knox neighborhoods to downtown as well as South Knox to east and downtown via a James White Parkway revamp would be a major improvement. Also, focusing on creating a better connection from Bearden to downtown via transit, pedestrian and bicycle options would strengthen the connection between Bearden, Campus and downtown. Let the heavy traffic use the interstate and make local traffic, transit and pedestrian traffic the focus for streets like Kingston Pike and Broadway near downtown. | |

| | |
|---|---|
| Middle class thinks mass transit is only for poor people. And as a catch-22, therefore not enough ridership to justify a mass transit system that is so useful that everyone will use it. To overcome we need to invest before the ridership is there. | |
| No method of transit is going to be better than another because it is going to take interconnectedness of all modes of travel to succeed, including those we don't yet use but are on the horizon: self-driving vehicles, true bullet trains to replace ancient trains and planes, modern fully equipped driverless buses, metropolitan rentable vehicles, etc. If we do not have the vision and guts to consider all of these possibilities, we will not only fail, but waste huge sums in the process; i.e. There will be a need for less parking downtown b/c of less personal vehicles. We will not need to expand our interstate system quite so rapidly if we supply faster, cleaner, trains running on the same corridors. They must; however, be interconnected or they will fail. We need to stop developing in a serial fashion and move to a parallel development of all viable options of transit not just those that favor present day companies i.e. Paving, excavators, concrete and asphalt. | |
| No options for senior citizens that can't drive. | |
| Not enough small grocery shops, parks, etc within walking distance and no safe place to walk (sidewalks) to get there. | |
| Not spending money locally. We don't get snow/ice removal. Our local roads: Davis Ford, Coulter, Tuckaleechee, Hitch etc. are not maintained. We don't need millions for 4 miles of the PPE when it could fix our daily local routes. | |
| Obesity/poor health, and environmental pollution. Riding bicycles and walking would combat both! | |
| Our biggest challenge is the lies like what came out of Plan East Tennessee, ie (PlanET). I attended all of the forums. I know how many people actually attended each one. The numbers were so low you had to start having private closed to the public forums so you could manipulate the numbers. Right before (*ed: name removed*) left the "Office of Sustainability", which by the way, was created with ARRA funds, (American Recovery and Reinvestment Act) she said her next target was the car. I will say here that the goal is to limit the number of cars allowed into the city. This will be done incrementally, sort of like boiling the frog. The non stop no marked turning lanes you have created are a major problem. But that's what you do. You create a terrible problem and then solicit the "Public" on how can we fix this. I will give you a quote from a T-DOT official commenting on these turning lanes while he was at a public meeting in Maynardville, TN. " They don't call them suicide lanes for nothin | |
| Outdated zoning and parking minimums. Lack of connection between downtown and surrounding neighborhoods on all sides and lots of dead space in between. | |

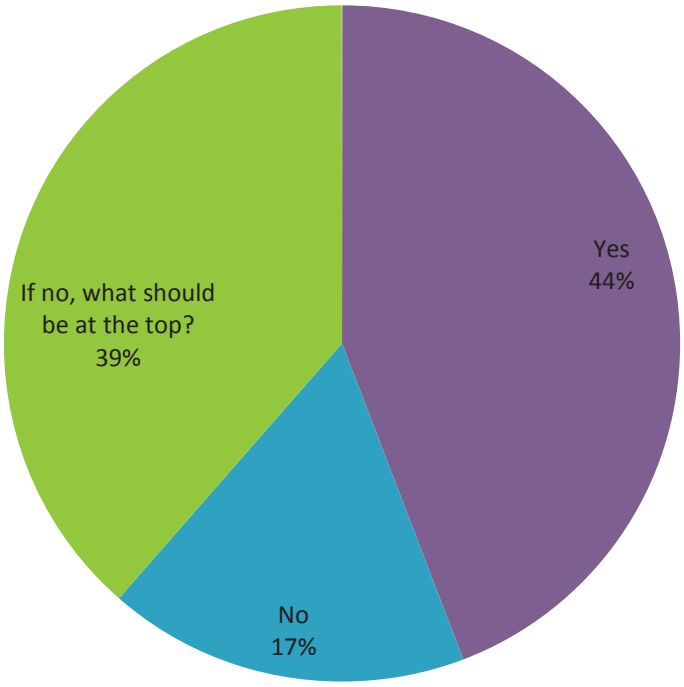
| | |
|---|---|
| Poverty. More jobs, better transit to jobs, more family support systems. Same communities for kids to go to school. | |
| Problemas en la calidad de proyectos de reparar los calles. Hagan reparacione que duren mas tiempo *(Translation: problems with the quality of road repairs – do repairs that last longer)* | |
| School zoning, poverty bigger than middle class | |
| The biggest challenge is bad government. Transportation challenges coming out of this are short-sited planning aimed at more cars and more cars. And more money for big construction and paving projects and those contractors. | |
| There's a lot of traffic on Morganton Rd. With all the new houses currently being built and now with 500+ more homes being purposed in the extension of Robert C. Jackson, it is going to be a nightmare getting out of my neighborhood (I live in Worthington.) The only ways I can think to help are to make Morganton a 4-lane road and/or add red lights. This will make the commute anywhere longer and more frustrating. Is any of this taken into consideration when the city approves more neighborhoods being built? It seems like more brand new houses in a concentrated will be more of a hindrance than a boost for our community. | |
| Too much regulation and expansion | |
| Two interstates running together through west Knoxville. West Hills is whittled down every time the interstate widens. As population increases so does traffic. They will never catch up with demand. Stop assaulting our neighborhood and build that the I75 corridor from North Knox County to meet with I75S west of Knoxville. Get on with it!! | |
| Unsafe infrastructure; Alcoa Hwy and Chapman Hwy are particularly dangerous due to high traffic volume and poor lane construction. | |
| We have better busing options now, but we still lack adequate bike pathways and walkways to facilitate other modes of transportation. I also find that it is difficult to hail rides using apps like Uber and participate in ride-sharing programs such as Knoxville's SmartTrips. I think this is a result of (mostly unsubstantiated) perceived danger in our East Knoxville neighborhoods. People need to get to know us better, and we should promote our region better. | |
| Why do we even plan? The James White Parkway was planned for years, yet the TPO yielded to short term political gain. TPO lost respect in my book. This was a one piece of the solution to region's transportation issues and it was killed by the very vocal minority. | |
| dis-connectivity | |
| Lack of revenue | |
| traffic and environmental issues...air/water | |

## What ideas do you have for overcoming this challenge?

| *Response* | *# of responses* |
|---|---|
| More sidewalks | 55 |
| More transit (more frequent service) | 38 |
| More bike lanes, especially protected | 16 |
| More greenways | 14 |
| Mixed use centers so people can walk or bike to daily services | 14 |
| Light rail | 10 |
| Lower speed limits/reduce speeds | 3 |
| Infill development | 3 |
| Reduce speeds | 3 |
| We need more parks, greenways, and recreational areas to combat childhood obesity | 3 |
| Walking friendly communities with lots of green space. There is a lack of trees and sidewalks. Trees provide shade from sun protection from wind and are helpful for air quality. | 1 |
| build onto existing greenway infrastructure, not new sidewalk/greenway islands. Connect islands with trails if an ADA compliant solution is not immediately available | 1 |
| Transportation somewhat similar to European cities. Effective and convenient bus service even in outlying communities. All new subdivisions having sidewalks, as well as roadways. It is extremely unsafe walking in this community. There is absolutely nothing for senior citizens available in this community as far as transportation, unless one drives. Which as one ages is not an option. | 1 |
| To help reduce poverty, we need to have transportation modes that allow people to get to work, school, health care. | 1 |
| We need higher use fees on vehicles--use fees based on miles driven and weight of the vehicle-- slower speed limits, higher tax on gas and diesel, safer big trucks and construction projects aimed at human scale safety such as sidewalks, etc. | 1 |
| More compact shopping centers. Zipcars. More carpooling among neighbors. Park/ride options for transit. Compact development. Incentives to use transit. Increased downtown parking fees. Sidewalks. Sidewalks. Sidewalks. Incentives for building in transit corridors. Impact fees for new sprawl development. Urban satellite vibrant centers. | 1 |

| | |
|---|---|
| Since I live in a more rural area of Blount county and actually like it being rural, I just wish there were bike lanes. I feel that sidewalks would take away from the atmosphere that so many residence love. | 1 |
| Sidewalks and guardrails needed badly for Sevierville Pike. | 1 |
| shelters and benches at all bus stops | 1 |
| Please put sidewalks on Decatur and Taylor Rd and other nearby streets so the middle school children don't have to walk in the street! Very unsafe for them. | 1 |
| It's time to go on a road diet - Henley St needs to slow down. Summit Hill needs to downsize to two lanes. Neyland Dr is wide and surely can't justify all that asphalt | 1 |
| Parking downtown for increased venues and activities | 1 |
| Need to add GPS tracking on the bus system, so riders could easily see where the buses are and would know when to arrive at stops... Like Uber does. Also, please add electronic card payment system on buses. Many riders, especially younger people don't carry cash anymore! Much easier to swipe a card! | 1 |
| Need additional arterial roads in Blount County. | 1 |
| Need newer schools in East Knoxville. | 1 |
| Broadway in East Maryville could use a turning lane and bike lanes to help with the flow of traffic. Connecting the greenway to Clayton Homes would be very helpful since so many people locally work there. | 1 |
| Coulter Grove school area needs sidewalks or bike lane along Sevierville Road. | 1 |
| Transporte público disponible para todas las comunidades de la ciudad. Necesitan ampliar la disponibilidad y la frecuencia del transporte público. *(translation: Public transportation should be available for all city neighborhoods. Public transportation needs to amplify their availability and frequency.)* | 1 |
| It's be nice if we had sidewalks, especially on the major roads like Lamar Alexander Parkway, Sevierville Road and Broadway in the city limits of Maryville. It'd also be nice if Dogwood crossed Sevierville Road as a single intersection. Do all the widening projects on Sevierville Road come with new sidewalks? | 1 |
| Raise taxes | 1 |
| widen some of the roads | 1 |

## Are we prioritizing the right projects now to be ready for 2040?

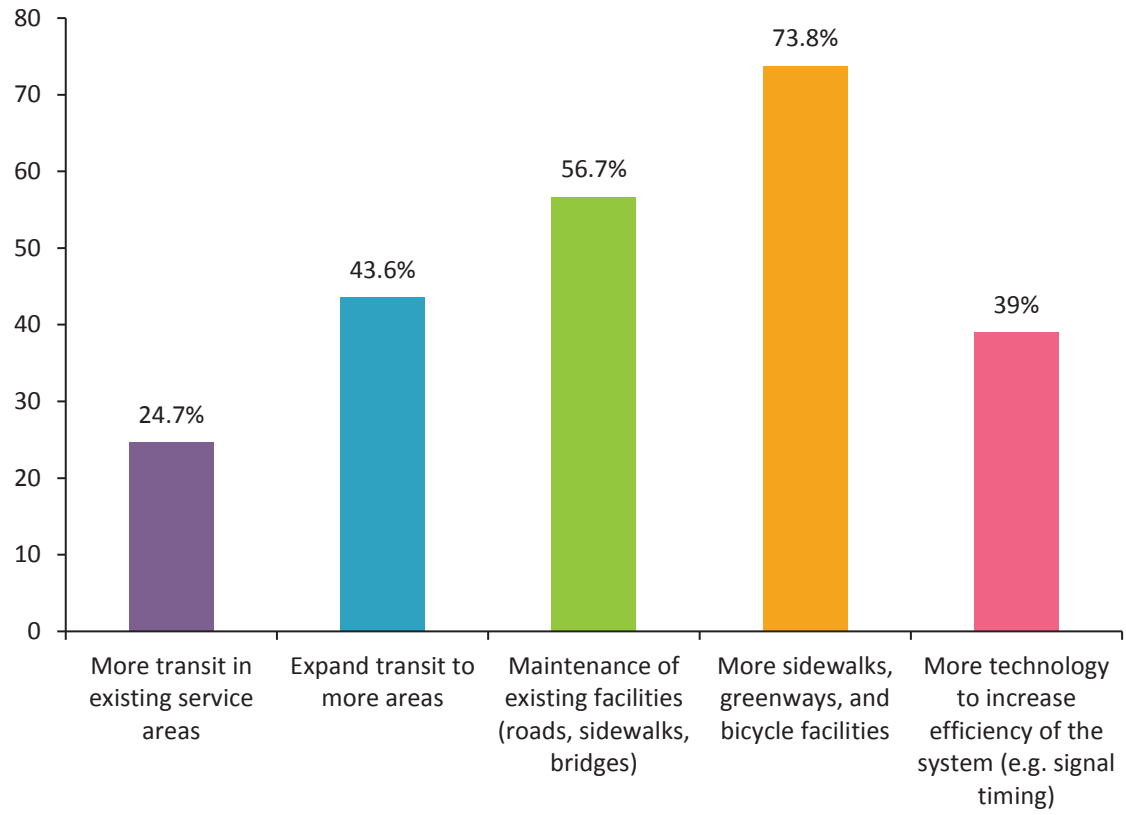



| *If no, what should be at the top?* | *# of responses* |
|---|---|
| Sidewalks | 19 |
| Transit | 19 |
| Bike lanes | 13 |
| Maintenance of roads, greenways and sidewalks | 8 |
| Greenways | 7 |
| Light rail | 5 |
| Signal timing/coordination | 2 |
| Alcoa Hwy | 1 |
| All the investment in S Knox seems to be a top priority, which is great. The James White Parkway makes no sense. I would like to see more sidewalks/pedestrian/bike lanes for kids | 1 |
| Alternates to driving | 1 |

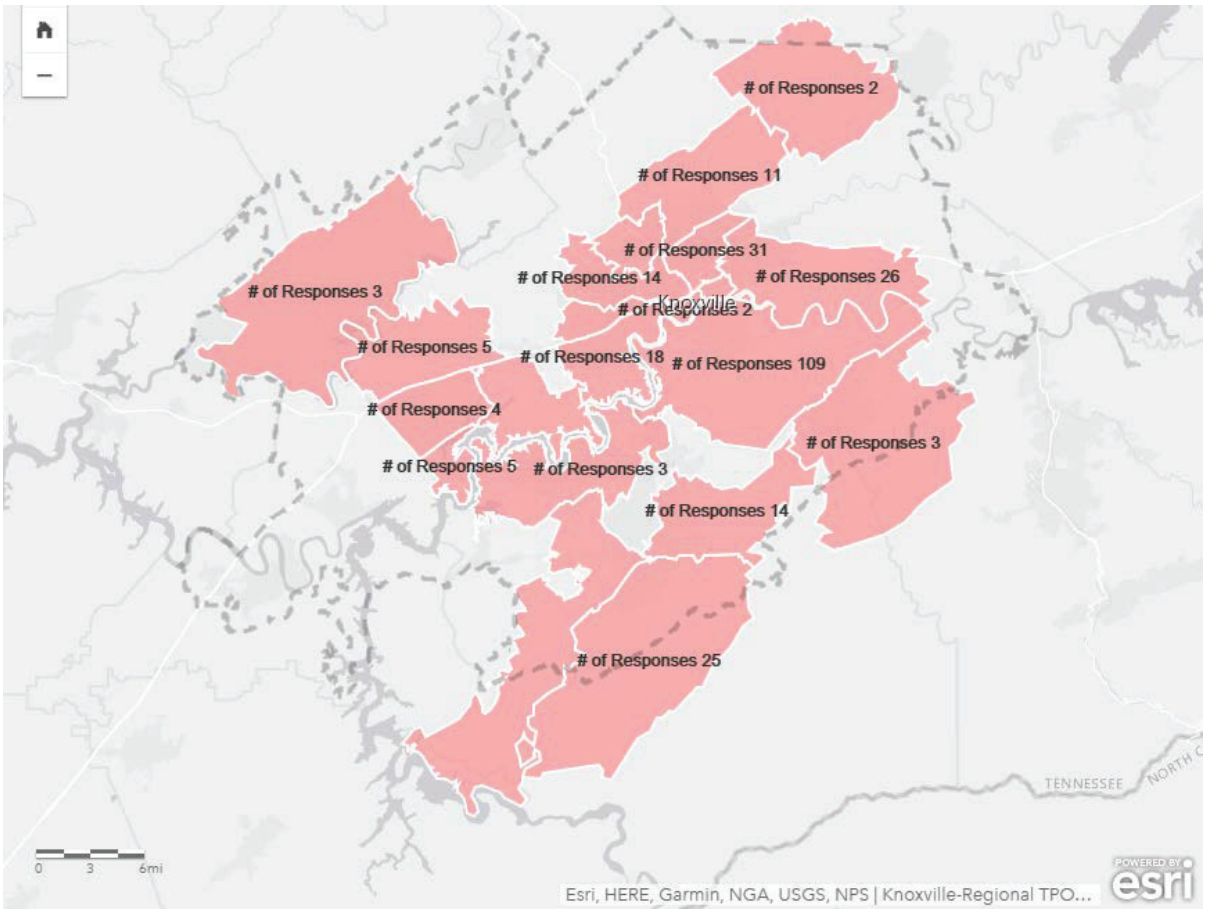
| | |
|---|---|
| BRT | 1 |
| BUSES to the Airport, Bicycle Rentals, Public Transport | 1 |
| Bike lanes and sidewalks | 1 |
| Bike lanes, safety for cyclist. | 1 |
| Child safety, less crime, children to be able to play safely, more vegetation, less waste. | 1 |
| Complete construction, bridge safety, I live off of Alcoa Hwy | 1 |
| Continue to improve public transit, but make powerful and immediate moves to create sidewalks and protected bike paths that people can use to get literally anywhere. Make public transit the new normal transit, and make biking and walking the obvious options when public transit is an excessive option. Show people the research and facts of how public transit is the greener option and how it is so simple and inexpensive to be healthy and just walk or bike down the road (if there were safe walk/bike paths)-- it\'s so simple to be healthy! | 1 |
| Eliminate James White and reduce the lanes of Henley and Summit. | 1 |
| Greenways and bike lanes are a great start, but often people have health issues or their place of employment is too far. These issues prevent many people from being able to take advantage of these resources. Parking at a designated area to catch a city bus or options like AMP that had been proposed in Nashville is a great idea.  AMP Knoxville! | 1 |
| HOV lanes and pellissippi finished | 1 |
| If these plans are not including a eye on technological advances, it would be a great waste on time and money. | 1 |
| In general, projects that are local in scope and directly impact the livability of local residents should be at the top of the list. | 1 |
| Intra-city (local) projects | 1 |
| Local organizations have access to local youth who should be considered when marketing to the local community. the more generational awareness, the better our communities will become for the next 20 years. The lack of monetary resources to build and enrich these citizens are highly needed.  There are organizations that need monetary support to enrich their mission\'s power. | 1 |
| Making communities more walker and biker friendly. Playgrounds throughout the city. Make bike pumps available. | 1 |
| More community input | 1 |
| Need more options | 1 |

| | |
|---|---|
| Rail alternatives, Interstate circle around Greater Knoxville. | 1 |
| Right now they need to finish all construction and building stores and then work on other projects in the near future | 1 |
| Roads STOP TRANSIT  IT NOT USED SUFFECIENTLY. | 1 |
| Technology | 1 |
| There needs to be more bike facilities in East and North Knoxville | 1 |
| There should be more transit options in low income areas | 1 |
| Transit in Blount County/ bike lanes | 1 |
| Would like more meetings about our community | 1 |
| Yes! Recent work has been highly progressive.  It all takes shape when residences can reach grocery stores.  The other things: Ice cream shops, whatever come together when all the big stuff is there. | 1 |
| higher priority for multi-mobility projects | 1 |
| less capacity building projects. | 1 |
| park and rides | 1 |
| projects that increase the human scale safety of our infrastructure | 1 |
| reducing crime, government, financial wellbeing. | 1 |
| revitlization, community activities, crime prevention, beautification | 1 |

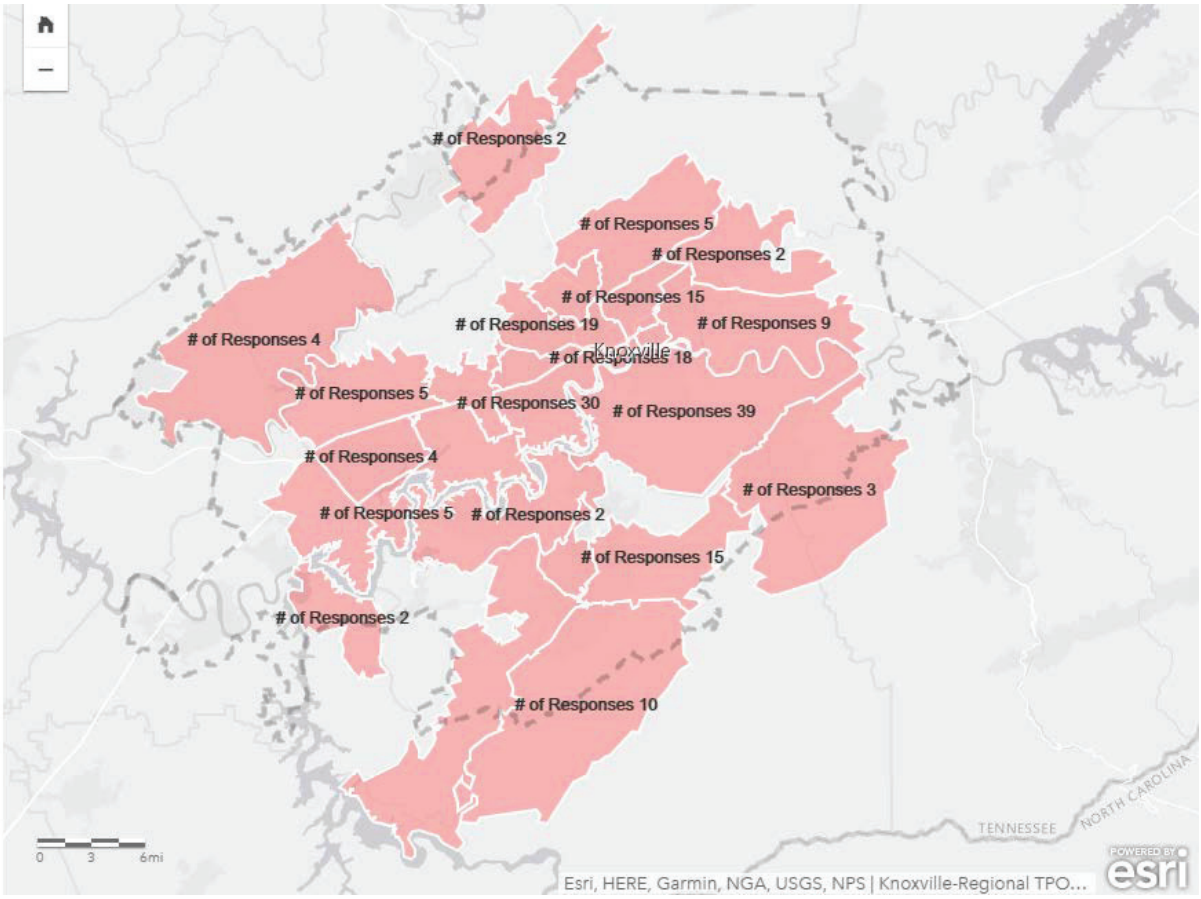
## What should receive the most funding? (pick 3)



**Home zip codes** of survey respondents:




**Work/school zip codes** of those who are employed or full time students:



# Mobility Advisory Committee

The Mobility Advisory Committee (MAC) was a diverse stakeholder group formed to provide guidance and insight to the Mobility Plan. The MAC consisted of representatives from many sectors, including health, education, business, economic development, tourism, community development, planning, and transportation, as well as agencies who work with disadvantaged and underserved communities. MAC members assisted with outreach by communicating issues and surveys to their own agencies, audiences, and customers/clients. Information shared with the MAC at their meetings can be found online. http://knoxmobility.org/mobility-advisory-committee/

# Interactive Project Map

The TPO created an interactive online map of all the projects submitted by cities, counties, and TDOT for consideration. Projects on the map could be sorted based on category (e.g., road, transit, or bicycle/pedestrian) or location. More than 140 comments were received on projects. After the projects were prioritized based on project selection criteria, the map was updated, and comments were then accepted for the revised list. You can see comments received both before and after prioritization here. http://knoxmobility.org/recent/public-comments-on-mobility-plan-now-available/

# Speaker Series

To create community dialogue around transportation and related issues, the TPO and partner organizations brought in several guest speakers throughout the process. MAC members, elected officials, and the public were invited to attend all of these events.

## 2015

Gil Penalosa, 8-80 Cities, discussed the nuts and bolts of creating great places for all, from 8 to 80 years old. His theme was *From Talking to Doing: Creating Vibrant Places for All*. His visit inspired three subsequent Open Street events.  - April 23-24, 2015

## 2016

Mark Fenton, Public Health and Transportation Consultant, led a *Walkability Workshop: Enhancing Commerce and Health* – April 8, 2016

Gary Toth, Project for Public Spaces, talked about placemaking and transportation issues at *East Tennessee Quality Growth's Plain Talk on Quality Growth Conference* - April 28, 2016

Billy Hattaway, District 1 Secretary, FL DOT, also spoke at the Plain Talk on Quality Growth conference about the importance of street design – April 28, 2016

Ian Lockwood, Toole Design Group, spoke at a free community event about how streets influence our cities and neighborhoods. He also conducted a free training on *Creating Great Streets* for planners, engineers, planning commissioners, and developers – July 26-28, 2016

Chuck Marohn, President, Strong Towns, spoke at the Tennessee American Planning Association's annual conference, co-sponsored by the Tennessee Institute of Transportation Engineers, during a luncheon open to the public - September 22, 2016

Joe Minicozzi, Principal, Urban3, discussed the fiscal impact of development in our communities at a free public event co-sponsored by the Tennessee Department of Health, Knoxville Association of Realtors, Knox County Health Department, and East Tennessee Quality Growth – November 29, 2016

### 2017

Happy Healthy Smart Symposium, The East Tennessee Community Design Center (ETCDC) and the TPO hosted an innovative symposium to find new and better ways to connect people and places, with a focus on what makes a happier, healthier and smarter region. The sessions featured screenings of short documentary videos, augmented by commentary and analysis from nationally and locally-recognized experts. In support of this effort, the U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) offered assistance to facilitate a peer exchange to support the participation of national experts whose expertise is in mobility, urban design, smart cities technology, and innovation - March 29- 30, 2017.

Ellen Dunham-Jones, Professor, Georgia Institute of Technology, discussed ways we can redesign our communiites into more walkable and more engaging places - April 4-5, 2017.

## Community Outreach Efforts

Traditional public meetings have historically not been well attended. As a way to engage more community members, the TPO focused on co-hosting meetings in different locations with our partners (e.g., City of Oak Ridge, Knoxville Area Transit). TPO staff also made themselves available to speak to community and civic groups about the Mobility Plan and transportation planning in general.

While some events yielded as few as a single completed survey, more surveys were usually taken home than completed at the event itself.  Nineteen surveys were completed by non-English speaking Hispanic community members at Lonsdale Elementary School and Centro Hispano (a community center that aims to improve quality of life for multicultural families in East Tennessee). South Knox Elementary School and Green Magnet School sent surveys home with all students, which resulted in 81 returned surveys.  A total 117 surveys were completed on paper through this outreach, and others were completed online.

## Pop up meetings (booth at an event)

**Oak Ridge City Blueprint Kick-Off Meeting**

Thursday, Jan 26, 2017
4 - 7:30 p.m.
High Places Church, 37830

**What we heard:**

Need transit in Oak Ridge and to Knoxville/ Knox County
Walking – improved and expanded sidewalks and safe road crossings
Expansion of greenways/trails
Mobility for seniors – transit and walking

**New Harvest Park Farmers Market**

Thursday, Feb 9, 2017
3 to 6 p.m.
4700 New Harvest Park Lane, 37918

**What we heard:**

Walking – lack of sidewalks

**Burlington Library Game Night**

Thursday, Feb 16, 2017
5 – 8 p.m.
4614 Asheville Highway, 37914

**What we heard:**

Lack of investment in East Knoxville
Need more transit, greenways, and bike facilities

**City of Knoxville Neighborhoods Conference**

Saturday, March 11, 2017
8 am – 2 pm
Knoxville Convention Center, 37902

**What we heard:**

Need more bike lanes, especially protected bike lanes
Need rail transit
Need more sidewalks and greenways
Like the TPO online project map

## Surveys Completed

| | | |
|---|---|---|
| February 9th | New Harvest Farmer's Market | 2 surveys |
| February 16th | Burlington Branch Library | 2 surveys |
| February 17th | Lonsdale Elementary School | 5 surveys (Spanish) |
| February 21st | Centro Hispano | 12 surveys (Spanish) |
| March 7th | New Hopewell Elementary School | 1 survey |
| March 8th | Beaumont Magnet School | 12 surveys (1 Spanish) |
| March 9th | Dogwood Elementary School: | 2 surveys |
| March 15th | Green Magnet School | 24 surveys |
| March 15th | South Knox Elementary | 57 surveys (1 Spanish) |

# Previous Community Engagement

Community input from the Plan East Tennessee effort provided a strong foundation for the work of this plan. Two phone surveys were conducted in 2012.[2] Common themes emerged from these surveys:

- People say there is a lack of access to transit and sidewalks.
- Two highest priorities for improving infrastructure are:
  - Improving the quality of local roads
  - Increasing the availability of transit
- The top two spending priorities are:
  - Attracting high quality jobs
  - Improving the region's transportation system

The Plan East Tennessee planning process also included extensive community engagement, in the form of public meetings with small-group discussion, "meeting-in-a-box" presentations and surveys, innovative online survey tools, and multidisciplinary working group meetings.

Based on this extensive input, eight regional goals were developed, including more transportation choices and more efficient infrastructure. Objectives were developed based on people's input on how best to accomplish these goals.

For more efficient infrastructure, the top three objectives were:

- Adequately fund maintenance.
- Conserve water and energy.
- Avoid development not supported by existing infrastructure.

For more transportation choices, the top three were:

- Create more bicycling and walking opportunities.
- Provide options for people who do not drive.
- Encourage development that supports transit.

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**2** A telephone survey of 2,000 residents in Anderson, Blount, Knox, Loudon, and Union counties was conducted between February 8, 2012 and March 28, 2012 to measure attitudes and opinions about problems facing the region and priorities for future growth. A second telephone survey of 2,000 residents in the same counties was conducted between August 15, 2012 and October 9, 2012 to measure opinions about how to improve the future quality of life within five focus areas: Economic and Workforce Development; Environment; Healthy Communities; Housing and Neighborhoods; and Transportation and Infrastructure.

# 2013 TDOT Survey

TDOT completed a statewide customer survey between November 2013 and January 2014. It assessed satisfaction levels with the quality and services of the transportation system and prioritized services and improvements. It consisted of a Resident Survey, an Elected Official Survey, and a Partner Survey.[3]

Respondents believed TDOT should:

- Evaluate all projects equally based on today's needs (*rather than honoring projects on the list for a long time*).
- Expand the capacity of an existing road that is heavily congested *(instead of building new roads*).
- Focus investments in areas of the state with greatest need (*vs. spreading investments equally across the state*).
- Fund a larger number of smaller projects in few places (*vs. funding a small number of large projects in more places*).

Based on this feedback, the public's priorities are to:

- Build strong towns.
- Grow quality places.
- Improve the health of our people and the environment.
- Expand choices for all.
- Invest in what we have.

The goals, project selection criteria, and performance measures for the plan were based on all of these collective priorities.

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**3** Of the 8,000 Tennessee households selected at random to receive the Resident survey, 2,729 residents responded. A total of 333 officials, including city mayors, county mayors, and members of the Tennessee General Assembly, participated in the Elected Official survey. In addition, 454 responses to the Partner Survey were received; the partner survey was sent to a wide cross-section of planning partners, including city managers/administrators, street superintendents, county highway superintendents, rural and metropolitan transportation planning committee members, transit providers, Tennessee development districts, and freight advisory committee members. See more at: https://www.tn.gov/tdot/article/transportation-strategic-planning-customer-focus-customer-survey-2013#sthash.JalpE9O7.dpuf

# MOBILITY PLAN 2040 COMMUNITY OUTREACH AND ENGAGEMENT OBJECTIVES, STRATEGIES, AND EVALUATION

1. Ensure widespread opportunities for two-way communication. Participate in at least one outreach event per month, with 85 percent of attendee surveys expressing satisfaction with opportunities for involvement.

   Strategies:
   - Partner with existing community groups and organizations to conduct Community Conversations tailored to meet resident needs.
   - Host a speakers' series on related transportation topics.
   - Work with local government and agency partners to identify community events that provide diverse audiences.

   Evaluation Measures:
   - Participation Log, Surveys

2. Hold at least 25% of outreach events with groups either directly or indirectly representing traditionally underserved populations, including young people.

   Strategies:
   - Coordinate with faith-based organizations, disability advocacy groups, senior centers, social service groups, and others serving these demographics to identify potential locations for Community Conversations.
   - Coordinate with schools in targeted communities to send information home with students.
   - Work with local board and committee members to identify specific underserved groups in their communities that would benefit from transportation planning information.
   - Work with local government and agency partners to identify community events targeting underserved audiences.
   - Translate materials for non-English speaking or visually-impaired audiences, where appropriate.

   Evaluation Measures:
   - Participation Log, Surveys

3. Report public input results to decision-makers by providing regular community outreach updates to boards and committees through visually appealing documents and presentations.

   Strategies:
   - Compile reports that provide photos, demographic information, and a summary of citizen feedback gathered at outreach events.

   Evaluation Measures:
   - Community Event Reports, Presentations

4. Ensure that all Mobility Plan 2040 print and electronic materials communicate messages in an effective, appealing way by using visualization (photos, illustrations, charts, etc.) and simple language.

   Strategies:
   - Establish a brand for Mobility Plan 2040 to make the effort immediately recognizable in public presentations and meetings, special events, and plan materials.
   - Include various ways to submit public comments (phone, email, social media, etc.) on all materials.
   - Strategically place QR codes in outreach materials to encourage further citizen engagement.
   - Place regular articles on public involvement activities for Mobility Plan 2040 with accompanying visuals in internal newsletters and share with partners.

   Evaluation Measures:
   - Content Review, Surveys

5. Provide online opportunities for the public to learn about the transportation planning process through the project website, achieving a monthly average of increasing unique visitors to the site by 10 percent.

   Strategies:
   - Add a blog component to the website with regular articles about transportation issues.
   - Drive traffic to the website from social media channels.
   - Include the website address in all materials and presentations and encourage visits to learn more.
   - Use QR codes in printed materials to point citizens to specific areas of the website for more information, including the event calendar and plan sections.
   - Use online surveys at various milestones during the planning process to gather input.

   Evaluation Measures:
   - Website Statistics (Google Analytics)

6. Provide opportunities for round-the-clock public engagement through social media channels, achieving increases in Twitter followers and Facebook interactions.

   Strategies:

   - Find and share recent national news articles that illustrate key long-range transportation planning issues.
   - Encourage continuous two-way communication with the public by posting photos from outreach events and stimulating interest in future events.
   - Explore additional social media channels for potential use.
   - Post at least one question of the month to garner public comments on relevant topics.
   - Create a campaign hashtag to use on Twitter for the duration of Mobility Plan 2040 public involvement process.

   Evaluation Measures:
   - Social Media Statistics

# Public Involvement Strategies

## 2040 Plan Branding

We established a brand to make the Mobility Plan 2040 planning effort immediately recognizable in public presentations and meetings, special events, and plan materials. A logo was developed that helps community members connect with the importance of shaping the region's mobility future.

## Board and Committee Meetings

Executive Board and Technical Committee meetings included periodic updates on Mobility Plan 2040 and outreach activities. Members were offered opportunities to get involved with public engagements in their communities.

## Elected and Appointed Officials Coordination

The TPO kept local, state, and federal officials briefed and engaged. This occurred through avenues including the agency newsletter, distribution of plan materials, and individual briefings and/or periodic presentations to city and county commissions.

## Regional Partnerships

Productive partnerships with other transportation agencies, local governments, and key community organizations helped raise awareness of Mobility Plan 2040. The main avenue for this was the Mobility Advisory Committee (MAC), with more than 30 members from the region. The MAC was formed to provide staff with expertise and insight as we updated the plan. The MAC was made up of a diverse, citizen-based group of transportation experts, as well as representatives from the business sector and those working with disadvantaged and underserved communities.

**The MAC served as:**

- A sounding board
- A diverse perspective
- A guiding body for recommendations

## Community Conversations

Since proactive public involvement often means meeting community members where they live or congregate, the TPO conducted Community Conversations with business groups, cultural, civic, and fraternal organizations, churches, and others.

Staff created engaging presentations that relied on graphics and audience interaction to tell the transportation story, including challenges of planning for the future, project highlights, and funding. Electronic polling devices were used to gather participant input whenever possible. Paper versions were offered for groups preferring not to use technology or where Internet access was unavailable.

**Community Conversations included:**

- Loudon Committee of 100 – March 10, 2016
- Knoxville Chamber Transportation and Infrastructure Committee – March 28, 2016 and September 12, 2016
- Knoxville-Knox County Community Health Council - October 26, 2016
- City of Maryville Planning Commission - March 20, 2017
- American Society of Civil Engineers - March 31, 2017

## Strategic Media Plan

Integrating the media in public participation strategies fosters trust and maximizes the team's ability to inform and engage a broad audience. We utilized free media, a cost-effective method of communicating with the public. A media plan was developed and included:

- Key messaging and talking points.
- A comprehensive media list.
- Communicating proactively with ethnic, non-mainstream media.
- Responding quickly to comments and questions.

# Tools and Tactics

## Newsletter

The new TPO e-newsletter announced the kickoff of Mobility Plan 2040. Subsequent issues provided updates on the planning process and public involvement opportunities, as well as solicit feedback. The newsletter will include visuals to help people understand why they should contribute to the plan's development.

## Online Surveys

Online surveys were another cost effective tool to collect public comment on Mobility Plan 2040. TPO staff identified opportunities for online surveys at milestones during the planning process. Survey instruments were thoroughly reviewed and approved before implementation. Reports on survey findings were made available to the Executive Board, Technical Committee, and Mobility Advisory Committee, as well as posted on the project website.

## Interactive Activities

The TPO used interactive tools at Community Conversations and other events to gather feedback and help participants understand the planning process and decisions that need to be made about meeting future transportation needs.

## Website

The TPO's existing website was used to disseminate information about Mobility Plan 2040, engage the public in a conversation about important issues related to the plan, and collect feedback via online surveys and comment links. Agency newsletters featuring plan updates were posted. Links to municipal and other transportation agency websites were solicited to actively seek and help drive traffic to the project site.

## Social Media

The TPO engaged community members through social media including Facebook, Twitter, and Instagram. Use of social media focused on real-time dissemination of information relevant to the transportation planning process and on obtaining input on targeted issues of importance.

# LRMP 2017 UPDATE OUTREACH

## December 16, 2016

**Us Army Corps of Engineers**

**Tennessee Valley Authority**

**Kelly Sheckler** US EPA Region 4

**Cassius Cash** Great Smoky Mountains National Park

**USDA Forest Service Southern Research Station**

**TN Dept. of Environment and Conservation**

**Leslie Meehan** TN Department of Health

**David Calease** TN Historical Commission

**Brock Hill** Tennessee State Parks, Bureau of Parks and Conservation

**Ed Carter** TN Wildlife Resources Agency

**Edward Ellis** US Housing and Urban Development Office

## February 2, 2017

**Cherie Phillips** Office on Aging, Clinton, TN

**Joanie Shaver** Office on Aging, Maryville, TN

**Susan Long** Office on Aging, Knoxville, TN

**Toby Brewster** Office on Aging, Loudon, TN

**Jane Foraker** Office on Aging, Sevierville, TN

**Rick Meredith** Anderson County Chamber of Commerce

**Donna Norris** Lake City Chamber of Commerce

**Parker Hardy** Oak Ridge Chamber of Commerce

**Bryan Daniels** Blount County Chamber of Commerce

**Mike Edwards** Knoxville Area Chamber Partnership

**Farragut/West Knox Chamber of Commerce**

**Michael Bobo** Loudon County Chamber of Commerce

**John Linsenbigler** Seymour Chamber of Commerce

**David Crowley** Anderson County Planning Department

**Houston Daugherty** Anderson County Regional Planning Commission

**John Stair** Clinton Regional Planning Commission

**Rocky Top Municipal Planning Commission**

**Spence Boardman** Norris Municipal Planning Commission

**Kathryn Baldwin** Oak Ridge Community Development Division of Planning

**Terry Domm** Oak Ridge Municipal Planning Commission

**Thomas Lloyd** Blount County Planning Office

**Ed Sturky** Blount County Regional Planning Commission

**Bill Proffitt** Alcoa Regional Planning Commission

**Chris Hamby** Alcoa Planning Department

**Leroy Parker** Friendsville Municipal Planning Commission

**John Loope** Louisville Municipal Planning Commission

**Scott Poland** Maryville Planning Department

**Fred Metz** Maryville Regional Planning Commission

**Nola Cummings** Rockford Municipal Planning Commission

**Sandy Headrick** Townsend Municipal Planning Commission

**Rita Holiday** Farragut Municipal Planning Commission

**Mark Shipley** Farragut Planning Department

**Laura Smith** Loudon County Planning Department

**Charles Harrison** Loudon County Regional Planning Commission

**Bill Ghormley** Lenoir City Regional Planning Commission

**Hamil Carey** Loudon Regional Planning Commission

**Jack McMahan** Sevier County Regional Planning Commission

**Jeff Ownby** Sevier County Planning Department

**Stephanie Wells** Anderson County Tourism Council

**Katy Brown** Oak Ridge Convention & Visitors Bureau

**Smoky Mountain Convention & Visitors Bureau**

**Kim Bumpas** Knoxville Convention & Visitor Bureau, Inc

**Rachel Baker** Loudon County Visitors Bureau

**Dave Jones** TN Dept. of Tourist Development Heritage & Community Tourism Development Office

**Julie Graham** Middle East Tennessee Tourism Council

**Allen Neel** East Tennessee Economic Development Agency

# PUBLIC FEEDBACK - COMMENT PERIOD 1

## 129 Items Found (July - September 2016)

For Mobility Plan 2040 TPO staff created a new project website to review and comment on proposed projects. Cities, counties, state and other agencies across the TPO's metropolitan planning area submitted projects requesting federal funding. Staff developed a web based mapping tool as part of our effort to provide additional opportunities for community members to review projects and provide feedback. The website allowed users select a project through a map or project list and learn about the details such as requested and proposed funding amounts and project schedule. The TPO received 207 comments utilizing this tool over two comment periods. Those comments are below.

The map for the plan can be found here: http://maps.knoxmpc.org/app/mobility.

| Date | Agency | Project Title | Project ID | Mesage |
|---|---|---|---|---|
| 7/29/2016 | TDOT | Edgemoor Road (SR-170) - Phase 1 | 09-101a | Don't see this as particularly beneficial since doesn't co rrect a major safety or traffic flow issue. Wide shoulders for bike lanes m aybe, but 5 laning this would just turn it into a high traffic highway that no sane person would want to bike on , plus would destroy the ambiance of Haw Ridge bike and greenway trails, already have significant vehicle noise on these trails |
| 7/29/2016 | TDOT | Edgemoor Road (SR-170) - Phase 2 | 09-101b | A turn lane and wide shoulders for bikes would be good, but making it 5 lanes would just increase speeds and encourage additional traffic as became a cut through from I40 to I75 turning a local thoroughfare into a hi gh speed highway that no sane person would want to bike on |
| 8/11/2016 | TDOT | Edgemoor Road (SR-170) - Phase 2 | 09-101b | I commute on this road everyday from Knox to Oak Ridge. I think i t is long overdue to widen this road and adding bike lanes is a great idea. I have often wanted to commute by bike but it is too narrow, especially o n Raccoon Valley Rd. |
| 9/1/2016 | Alcoa | Pellissippi Place Access Road Extension | 09-204 | Pellissippi Place should be terminus of this road. Better use of highway funds is to improve the myriad of roads that serve the county so they are more efficient at moving people and goods. Please cancel this project. |
| 9/6/2016 | Alcoa | Pellissippi Place Access Road Extension | 09-204 | There are several worthy road projects in Blount County, but I don't believe this is one of them. I would like to see the support of projects that improve safety and efficiency and fix the roads we already have. In my area of the county, road widening at stop signs (allowing right hand turns during peak travel times) and roundabouts ( Mentor Rd and Louisville Rd.) have improved driving conditions amazingly. I'd like our resources used in this matter. |
| 8/29/2016 | Blount County | Ellejoy Road Reconstruction | 09-209 | This area is very dangerous and needs immediate attention. Should be done earlier than 2022. Thanks |
| 8/28/2016 | Blount County | Ellejoy Road Reconstruction | 09-209 | I strongly support this project to improve one of the major feeder roads in Blount County. Like Morganton Road and Sevierville Road, this project will improve traffic flow into and out of Maryville. The lack of shoulders on this road demands that improvements be made to improve flow and, more importantly, safety. |
| 8/31/2016 | Blount County | Ellejoy Road Reconstruction | 09-209 | Traffic on this stretch of road is increasing pretty rapidly. This project should be funded, and done sooner. |

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| 8/28/2016 | Blount County | Morganton Road Reconstruction - Phase 1 | 09-211 | This project represents an excellent use of federal and state transportation money. Morganton road is a very dangerous roadway and a major feeder road into Maryville and the Foothills Mall. The lack of shoulders and the continued vehicular traffic from more and more developments along the road make this a very worthy project. |
| 8/31/2016 | Blount County | Morganton Road Reconstruction - Phase 1 | 09-211 | This is needed. |
| 8/29/2016 | TDOT | Old Knoxville Hwy (SR-33) Reconstruction - Rockford | 09-212 | All of Old Knoxville Highway needs improvement. Widening will help. Please do it as soon as possible. |
| 8/24/2016 | TDOT | Sevierville Rd (SR-35/US-411) Widening | 09-214 | The improvement does not address the problem of US 411 essentially dead-ending into Washington Rd resulting in a very inefficient flow of tra ffic trying to move west-ward through Maryville. Currently, traffic has to make dog-leg turns to continue west-ward onto US 321, and results in a sec tion of Washington Rd being shared for north-south and east-west traffic. The "improvement" will just bring more traffic to a bottleneck. |
| 8/30/2016 | TDOT | Sevierville Rd (SR-35/US-411) Widening | 09-214 | Improving this segment of Sevierville Rd (Hy411) is important and long overdue. This project should be done sooner. |
| 8/31/2016 | TDOT | Sevierville Rd (SR-35/US-411) Widening | 09-214 | Far better to spend the money improving existing roads like this project rather than spending it on the huge cost of the PPE. |
| 8/31/2016 | TDOT | Sevierville Rd (SR-35/US-411) Widening | 09-214 | This needs to be done. Would like to see it done sooner. |
| 8/27/2016 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-216 | This should be done as soon as possible, as almost everyone in Blo unt County knows. So should the other Alcoa highway widening projects in K nox County. |
| 8/31/2016 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-216 | This is a worthwhile expenditure of our limited transportation funds. There is widespread support for improving Alcoa Highway/US129 from the airport north into Knox County. A parallel frontage road is a good solution for maintaining safety while also providing access to area businesses. |
| 8/31/2016 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-216 | Please make this project a higher priority. We need this improvement, sooner rather than later. |
| 8/31/2016 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-216 | Alcoa Highway is a scary and dangerous disaster. It needs to be fixed immediately! This needs to be a project of the highest priority! |
| 9/1/2016 | TDOT | Alcoa Hwy (SR-115/US-129) | 09-218 | Improvements to Alcoa Highway, Hwy129, are much needed. Please make a priority. |
| 8/24/2016 | Blount County | Morganton Road Reconstruction - Phase 2 | 09-229 | This really is not one of the most urgent needs in the county. I have traveled this road almost daily for the past twenty years, and it has a satisfactory level of service. There may be a few trouble spots for impr ovements. I do not live on this road. |
| 8/29/2016 | TDOT | Old Knoxville Hwy (SR-33) Reconstruction | 09-231 | All of Old Knoxville Highway needs improvement, from Hunt Rd into Maryville. Traffic congestion can be very daunting, especially in the morning and afternoon. Do everything you can to make it better. |

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| 8/31/2016 | TDOT | Old Knoxville Hwy (SR-33) Reconstruction | 09-231 | This is an important area for road improvement. It is a commercial corridor that is ripe for re-development. It will aid in tying together development around Pellissippi Place to Hunt Road which has already been expanded to 4 lanes. Continuing 4 lane development from Hunt Road down to Wildwood will improve the connection of this area with downtown Maryville. |
| 8/31/2016 | TDOT | Old Knoxville Hwy (SR-33) Reconstruction | 09-231 | Would like for this project to be done sooner. |
| 7/28/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | The cost estimate for the Pellissippi Parkway Extension is ca. $40,000,000 less than the estimate in the DEIS in April of 2010. This makes little sense as costs of construction and land have gone up since then. Where did the new figure come from and how was it determined? |
| 8/4/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | TDOT needs to focus it's effort on improving the roads we alre ady have instead of investing funds into huge new road projects such as thi s one. Not only is it a waste of taxpayers dollars but it will only add to the sprawl already happening in Blount County. Not to mention enough valu able farm land has already been lost to roads and development. This projec t needs to be terminated and removed from the planning list immediately. |
| 8/11/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | Most major roads in Maryville and Alcoa would be relieved by the c ompletion of this project. It has been delayed for too long. |
| 8/24/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | A waste of money and at TDOT's own data, will accomplish very little and be obsolete before it is finished. |
| 8/27/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | This project should be cancelled. It will not accomplish what its proponents say it will and will ruin the remaining rural section of the co unty. Everyone who thinks this is a good idea should read CAPPE's comme nts about the FEIS before supporting this wasteful project. If this is the kind of project TN will do with more money, we should make sure we do not get any. |

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| 8/28/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I am strongly OPPOSED to the building of the PPE for many reasons. First of all, TDOT's own traffic studies show that it will NOT improve traffic safety or level of service beyond a few scant years at best. Meanw hile, it would absorb many millions of dollars that are desperately needed for repairs or improvements of our existing roads. We would get much more traffic safety and efficiency out of those repairs and enhancements, which are so numerous, and many of which have been delayed by lack of funding for years. Furthermore, the PPE will generate traffic, rather than decreasing it. If local roads were not improved before the PPE were to be built, how would th ey in fact handle the traffic it would generate? The terminus of the Parkway is logical right where it is, ending by the Cla yton development(s), and the envisioned Pellissippi Place, and Highway 33. SPRAWL: the PPE would increase sprawl, burdening local infrastructure with residential development, largely in the form of bedroom communities for Kn oxville. It takes decades for residential development to "pay" for itself, through property taxes or otherwise. The financial benefit of the PPE would not go to the local economy, but to developers. Local businesse s would struggle to compete with new big box stores along the PPE, themselv es likely granted tax incentives that further postpone any net increase in tax revenue for the county. Moreover, the claim (or notion) that the PPE would improve traffic flow WIT HIN Blount County is erroneous. Traffic flow would increase (not decrease) --between Blount and west Knoxville, as more Knox commuters would move home s to Blount. To the degree that the PPE allowed drivers to "bypass" ; downtown Maryville and Alcoa, businesses there would be adversely impacte d. There is absolutely no "need" for another highway to carry people t oward the Smokies when we have 321. In addition, this new road, if built, and its attendant sprawl, would dest roy one of the most scenic-resource areas remaining in Blount County, which is a gateway to the GSMNP. It would impact air and water quality. It wou ld destroy many remaining working farms. It would impinge on our remaining open space. Blount County's cultural heritage would be sacrificed as more homogeneity to the landscape ensued. For all the reasons above, I, and many others who live in Blount County, do not want another piece of interstate here. |
| 8/29/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | This project is not needed, and would benefit only a few people. Instead, please use this money to fund individual projects that would improve road safety and traffic flow. Thanks for listening. |
| 8/29/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I oppose extending the Pellissippi Parkway. The cost to do so is astronomical for such a small benefit. I'm not sure who actually would benefit. Granted there may be fewer cars on my road, but I doubt it since most of the traffic is coming through Rockford from Knoxville, heading into Maryville, not from West Knoxville or Oakridge. The money could be better used to fix the roads we have now. |
| 8/29/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | As a concerned Blount County citizen, I am ADAMANTLY OPPOSED to the Pellissippi Parkway Extension (PPE). This interstate highway is NOT NEEDED. It will have an unimaginable NEGATIVE IMPACT on the area along the route and on the precious quality of life in Blount as a whole. This proposed highway is a total waste of resources. The cost of this proposed road extension is $165,709,000. This means that for this 4.4 mile project, the cost would be $37,661,136 PER MILE! Additionally, there is NO DATA supporting the claim that efficiency or greater traffic safety will result from this short 4.4 mile extension. Furthermore, agriculture is a major industry in Blount County. The construction of the PPE would destroy a significant amount of farm land and uproot residents whose families have been successful farmers for generations. Waterways, including the Little River, are likely to have increased sediment and pollution, negatively impacting water species and water quality. The scenic beauty in Blount County abounds. Lush pastures, tranquil woods and singing birds would be replaced with concrete and asphalt and the loud noise of traffic if this project was completed. I respectfully suggest that the GREATER PRIORITY should be repairing and improving the existing roads. This would be a far better use of our resources and would have far more productive results. Knowing the cost of the PPE and the negative impact of this unnecessary road, I believe that the majority of Blount County citizens would strongly oppose the PPE and support the repair and improvement of existing roads. Thank you for the opportunity to express my comments. |

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| 8/28/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I am opposed to this project. I feel it is an unnecessary use of state resources. It would bypass many of the businesses in Maryville/Alcoa which could negatively impact them. Additionally, it would destroy farms and farmland which is still an important part of Blount County. |
| 8/28/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I am strongly opposed to this project. It is a colossal waste of money that should be spent on projects that will improve our feeder roads and not bypass the merchants downtown. The negative impacts on the Little River water system, the vistas towards the Smoky Mountains, and the loss of productive farmland held in trust by several generations of family farms would be terrible. |
| 8/28/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | We strongly oppose the PPE project in Blount County. We feel this precious farmland is much more important than the unneeded and wasteful highway extension. We fear the impact would be harmful to the Little River not to mention the scenic beauty of the area. This large amount of tax revenue should be spent on repairing the existing roads and bridges. |
| 8/27/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I don't like this expensive project. I'd like to see our state money spent on higher priority projects, such as Alcoa Hwy., Morganton Rd. and improving existing roads. |
| 8/30/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | $165,709,000 for 4.4 miles of unneeded interstate-style roadway is entirely too much of the taxpayers' money that the government has yet to collect. The EIS-advertised 'needs' for this road include safety & traffic reduction, while the EIS facts & figures support an opposite conclusion. Blount county does not need an unjustified traffic increase on its radial roadways {US 411, et al} to simply line the pockets of local politicians & developers {developed enough already, thank you}. Please stop the insanity and stop this project in its tracks. Thank You. |
| 8/30/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I feel like the cost of this project is extravagant. I also know that it will destroy a lot of farm land which adds to the beauty of the county that we live in. I believe that improvements to the existing roadways would be more beneficial to this community. |
| 8/30/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | My concern is the farms that will be affected by the extension and the overall affect on that region of the county |
| 8/30/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | The rationale behind the PPE has changed over the years, and it is far from being compelling. I am opposed to the proposed PPE and the findings of the FEIS. Blount County does NOT need a NEW interstate highway, especially when there is more than a $6 billion backlog for transportation projects in Tennessee! Instead, I hope you will adopt the motto "FIX IT FIRST" which recently has been expressed by Governor Haslam & Commissioner Schroer regarding the transportation needs in our state. I want to see Blount County thrive while maintaining the rural character of our great county! Luckily, both can be accomplished through thoughtful planning, updates, and maintenance of our existing roads. |
| 8/30/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I am against the Pellissippi Parkway Extension because it will disrupt large, old family farms and change the beauty of Blount County. Also, existing roads like East Broadway, needing fixing first and the studies that were done on the PPE did not show that it would actually benefit the traffic situation in Alcoa and Maryville. I also worry about the negative impact the PPE may have on our only source of drinking water in Maryville, The Little River. Thank you for letting me comment. Sincerely, Gabriel Cole |

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| 8/31/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | Why this costly and unnecessary project remains in the RMP, with a $6 billion backlog across the state, is a mystery. There are many needed road improvements in Blount County that can be done with $100+million. This isn't one of them -- it will not ease congestion or improve safety. Let's use our limited transportation funds responsibly. |
| 8/31/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I oppose spending for the PPE. This is far to much money to spend in the absence of data that completion of the PPE will improve traffic efficiency or traffic safety. There are many other much higher priority projects focused on improving and/or repairing existing roads in that area. In this time of tight resources, money should be spent to "Fix it First" rather than squandering funds on unnecessary new development. |
| 8/31/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | Do not build this highway. The costs (in taxpayer dollars, farmland lost, and potential harm to Little River) far outweigh any dubious benefits the PPE might bring. The new road will not significantly improve travel time or reduce congestion, per TDOT's own studies. It will not improve safety, but will add more traffic to Sevierville Rd, which is already overburdened and unsafe. |
| 8/31/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I am concerned about the absence of data to support claims this extension will improve traffic safety; the greater priority should be "Fix it First" - repairing/improving existing roads with our limited funds; this project is unnecessary, it will ruin Blount County and cost the state too much money |
| 8/31/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I'm commenting in opposition to PPE project as an unwanted, speculative project endorsed and promoted by an influencial few to the detriment of many. |
| 8/31/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I oppose the construction of this new road. We do not seem to be able to adequately take care of our current road system so instead of building a new road our present ones should be updated to accommodate the possible increased traffic. And farmland should be preserved not bisected by an unneeded road. |
| 8/31/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | Construction of the Pellissippi Parkway Extension will waste $165 million dollars that could be more effectively spent on other Blount County roads. Improving the stretch of Alcoa Highway from the airport to Knox County with controlled access will greatly reduce accidents and relieve traffic congestion. The section of Hwy 129 from the airport to Foothills Mall continues to carry high volumes of traffic at all times of day. Improvements to this section of highway would lessen traffic congestion and increase safety. The Pellissippi Parkway is an unnecessary highway. Another avenue to the Great Smoky Mountains is a wasteful use of resources, destruction of beautiful farm land, and an unwanted opportunity for more fast food and convenience store locations to emerge. Alcoa and Maryville businesses also rely on these travelers for sale of goods and services. PLEASE DO NOT FUND THE PELLISSIPPI PARKWAY EXTENSION!!! |
| 9/1/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | This road is a LOW PRIORITY. In fact, there are so many other projects more needed to improve mobility in Blount County, that this one should be scrapped permanently. We do not need a 4-lane highway in this area. Better use of monies would be to IMPROVE EXISTING ROADS so that there are multiple, efficient ways to get around. |
| 9/1/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | Please cancel this project. There are other ways to move people in this county. "Fix it First" should be the guiding principle for highway funds in Blount County. This new road will adversely affect air quality, destroy farmland, and generate even more traffic through this area. Spend highway funds on repairing and improving existing roads. |

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| 9/1/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | Countless studies have shown that going forward it is more cost effective and efficient to improve existing routes of travel than to continue to build new roads -- roads that will have to be maintained forever. Money should be spent to create a NETWORK of efficient, safe roads, not 4-lane highways. Please cancel this project. |
| 9/1/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I am in opposition to the Pellissippi Pkway Extension. The cost of the project to Blount County will far out way the benefits in the long term. We should not prioritize the building of new roads or highways when we have so much existing infrastructure that needs improvement and repair. Furthermore, the PPE is more of a political-driven project and the needs of other legit projects in Blount Co should be the focus of the limited funds available for such improvements. As TDOT's Commissioner has stated, "Fix it First" should be our priority! |
| 9/6/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | My recommendation to is repair, maintain and improve existing roadways before constructing new roadways. |
| 9/7/2016 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I just wish to state my opposition to the proposed Pellissippi Parkway Extension. I do not believe the potential benefits (claims of potentially increased traffic safety) outweigh the impact costs to the region--the loss of farmland and current mostly rural/agricultural uses, the loss of beautiful rural scenic resources, the negative effects on air quality, sound quality, and water quality, and the inevitable cumulative impacts on the unmatched biodiversity that still exists in that section of the adjacent and downstream Little River. This portion of Blount County countryside should be preserved, not defiled, and eventually ruined! |
| 8/27/2016 | TDOT | E Broadway (SR-33) at Brown School Rd | 09-237 | This will help move traffic and improve mobility in east Maryville. |
| 8/29/2016 | TDOT | E Broadway (SR-33) at Brown School Rd | 09-237 | a worthwile project. should be done sooner than 2022 |
| 8/31/2016 | TDOT | E Broadway (SR-33) at Brown School Rd | 09-237 | Glad to see this project is scheduled for 2022 and urge it be even sooner, as it will improve safety and ease traffic flow on all four roadways. It's a good example of 'improving our existing roadway system'. |
| 8/31/2016 | TDOT | E Broadway (SR-33) at Brown School Rd | 09-237 | This needs to be fixed. It has been a safety problem for decades. |
| 8/31/2016 | Maryville | W Broadway Ave (SR-33/US-411) Widening | 09-242 | This needs to be done soon. It is very congested here. |
| 8/31/2016 | Maryville | W Broadway Ave (SR-33/US-411) Widening | 09-242 | This section of road really handles too much traffic to function adequately, especially when schools are opening and closing. Yet there are no good alternatives for travel in those directions. Left turns are particularly problematic. Sidewalks are really needed for safe pedestrian crossing and walking along the road! |
| 8/29/2016 | TDOT | Peppermint Rd Reconstruction | 09-244 | this can be a dangerous area. I'm strongly in favor of doing this project as soon as possible. |
| 8/29/2016 | TDOT | Peppermint Rd Reconstruction | 09-244 | Peppermint Rd is too narrow and too many curves. It definitely need improvement. It has a lot of traffic during certain times. There is often a long line of cars trying to get out onto Sevierville Rd. I am in favor of this improvement. |
| 8/31/2016 | Blount County | Peppermint Rd Reconstruction | 09-244 | Far better to spend the money improving existing roads like this project rather than spending it on the huge cost of the PPE. |

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| 8/31/2016 | Blount County | Peppermint Rd Reconstruction | 09-244 | I travel this road almost daily. It does need shoulders and safety improvements. |
| 8/31/2016 | TDOT | Sevierville Rd (SR-35/US-411) Widening | 09-245 | Far better to spend the money improving existing roads like this project rather than spending it on the huge cost of the PPE. |
| 8/31/2016 | TDOT | Sevierville Rd (SR-35/US-411) Widening | 09-245 | Please move this project up on your priority list. There are children who live close to the schools in this area who cannot walk to school. |
| 8/31/2016 | TDOT | Sevierville Rd (SR-35/US-411) Widening | 09-245 | I consider the widening of this section of Sevierville Rd., with addition of curbs and sidewalks, to be a valuable project, which will improve traffic flow and increase safety on this heavily traveled road. In my opinion it is a much more worthwhile project than the extension of Pellissippi Parkway, which would destroy valuable farmland and greenspace and detract from the scenic beauty of Blount Co. without improving traffic efficiency or safety in a meaningful way. Please focus on repair and improvement of existing roads, such as Sevierville Rd., instead of extending the Pell. Parkway. |
| 8/31/2016 | TDOT | Sevierville Rd (SR-35/US-411) Widening | 09-245 | This should have happened in 1969 when John Sevier school was built, the surrounding areas were annexed into the city of Maryville, and the school was immediately over-populated, before it was 5 years old. The fact that my kids can't walk to a school that has been there for 47 years is beyond irritating and inconvenient. It is maddening. Sevierville road is too narrow - always has been. Not safe. No Pedestrian options. I can't even leave my home and go for a walk. Why has this city always been so against usable neighborhoods?! My kids also can not even walk safely to the brand new school that WE CAN SEE FROM OUR HOUSE because 411 is dangerous and won't be fixed until they have graduated high school. I live in the city, in between 2 schools. I want to have sidewalks where it is safe to walk. I would also appreciate some semblance of a shoulder when driving this road where people drive very fast, tailgate, pass, cross into on-coming traffic, etc. |
| 8/31/2016 | Alcoa | Sam Houston School Road Improvements | 09-247 | Far better to spend the money improving existing roads like this project rather than spending it on the huge cost of the PPE. |
| 8/31/2016 | Alcoa | Sam Houston School Road Improvements | 09-247 | I drive this stretch of road often. I do not see any need for the suggested improvements. |
| 8/31/2016 | TDOT | Sevierville Rd (SR-35/US-411) Reconstruction | 09-250 | Residents who live on US 411N/Sevierville Road and the people who drive it need this project sooner than 2040! The lack of shoulders and the poor sightlines make this road dangerous. Many drivers exceed the already too-high speed limit and wrecks are frequent. |
| 8/31/2016 | TDOT | Sevierville Rd (SR-35/US-411) Reconstruction | 09-250 | Far better to spend the money improving existing roads like this project rather than spending it on the huge cost of the PPE. |
| 8/27/2016 | TDOT | Relocated Alcoa Hwy (SR-115/US-129) | 09-257 | I think this is over-engineered if it remains 8 lanes, but there i s clear need for this "end" of Alcoa Highway to be safer. I am not sure why it cannot be done by upgrading the existing Alcoa highway through this area. |
| 9/1/2016 | TDOT | Relocated Alcoa Hwy (SR-115/US-129) | 09-257 | Please make project a top priority. This is a currently a dangerous and heavily traveled commuter road and main access to the Tyson-McGee Airport. |

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| 8/28/2016 | TDOT | Relocated Alcoa Hwy (SR-115/US-129) | 09-258 | I strongly support this project to improve the safety of the Alcoa Highway. The volume of traffic on this road demands that we take action to improve traffic flow and decrease the accidents. This is money well spent and not the tremendous waste of money in other projects like the Parkway extension. |
| 8/31/2016 | TDOT | Relocated Alcoa Hwy (SR-115/US-129) | 09-258 | Alcoa Highway is a scary and dangerous disaster. It needs to be fixed immediately! This needs to be a project of the highest priority! |
| 8/27/2016 | TDOT | Montvale Rd (SR-336) Widening | 09-262 | This should get top priority in Blount County. It will help solve a real and long-understood safety problem. |
| 8/30/2016 | TDOT | Montvale Rd (SR-336) Widening | 09-262 | The widening and improvement of this road is definitely needed. I have personally experienced the following problems, living on Wilson Ave. and having with two children go through the Maryville schools. Trying to turn left from Montvale, or onto it, during school "rush hours" (twice a day) is dangerous and often virtually impossible. At certain times you are better off going north in order to go south. Also a lot of drivers cut through the neighborhood (Wilson Ave., etc.) trying to avoid being stuck. They act as though they are still on Montvale and drive too fast. I asked the police to observe them, and in one 24-hour period, the traffic speed device recorded cars going as fast as 50 mph. Furthermore, I don't know how an emergency vehicle would manage to move along Montvale during these times. There is nowhere for cars to get out of the way except into the few businesses. Also, trying to cross Montvale to walk to school is dangerous, even at the crossings. There's such crowding and traffic that many drivers don't yield to pedestrians, or don't even seem to see them. We could walk to school from our house, and did sometimes, but it is so dangerous! A walkway along Montvale would definitely help, and needs to be on both sides. There are places where walkers are virtually in traffic. The east side of Montvale has no sidewalk at all--which, by the way, pretty much negates the usefulness of the crosswalk at Montvale Station! You can use the crosswalk but then, unless you are continuing on Boardman, in order to walk toward 321 you will have to climb a wall and walk in people's yards. I would also like to see a crosswalk somewhere between Montvale Station and the one at 321, with a traffic calming device. |
| 8/30/2016 | TDOT | Montvale Rd (SR-336) Widening | 09-262 | Montvale is in high need of improvements. This should be done sooner. |
| 8/31/2016 | TDOT | Montvale Rd (SR-336) Widening | 09-262 | This needs to be done, sooner rather than later. |
| 8/11/2016 | Knox County | Schaad Rd Extension | 09-605 | Why is this taking so long?? we have a newspaper that says it woul d be completed in2014 . car back ups and wrecks on Schaad Road every day a nd Ball Camp Pike study shows 8,000 cars a day, even more when school starts THIS NEEDS TO BE DONE NOW |
| 7/29/2016 | TDOT | Pellissippi Pkwy (I-140) and Dutchtown Rd Interchange | 09-623 | Need to improve safety of I40 traffic trying to go north on I140 a nd I140 northbound traffic trying to exit on Dutchtown. But do not see this as critical as improving traffic flow at Hardin Valley exit |
| 8/9/2016 | TDOT | Chapman Hwy Safety Projects | 09-626 | Very much needed. Lots of wrecks. Not safe for daily commutes or t o get into neighborhoods off of Chapman Hwy |
| 8/31/2016 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-628 | We need this improvement to Alcoa Highway. Please make this roadway safer. |
| 7/29/2016 | TDOT | Pellissippi Pkwy/Hardin Valley Interchange | 09-634 | This upgrade was needed years ago as soon as PSCC started growing, are safety issue with traffic backups on Pellisippi ,have new schools and many new houses plus businesses that bring even more traffic to interchange |

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| 8/11/2016 | TDOT | Pellissippi Pkwy/Hardin Valley Interchange | 09-634 | This intersection should be a priority on the list. It has major b ack-ups daily. This is the gateway to the fastest growing area of Knox Coun ty and will only get worse. |
| 8/11/2016 | Knox County | Karns Connector | 09-635 | There are not many options in this area to allow travel North - So uth. One consideration that must be made in this project is getting CSX to improve their crossing on Westcott to allow for more traffic. Also, The int ersection with Hardin valley would need to be improved to handle increased traffic. |
| 8/25/2016 | Knox County | Lovell Rd Widening (SR-131) | 09-637 | Personally, I think it's crazy to widen a two lane to a four l ane in a largely residential zone. Ian Lockewood, the transportation guest speaker, mentioned this project being such a bad idea. We're in a time where cities and counties are looking at ways to make places more livable, attract more people, and be smart with what we already have in place. This looks like a needless project with huge effects on the local community. |
| 7/29/2016 | TDOT | Pellissippi Pkwy (SR-162) | 09-647 | Definitely needed as long as the 6 lanes go through Solway and in clude the bridge connecting Knox to Anderson county. If it just dumps addit ional high speed traffic into the current bottleneck in Solway will only ma ke a bad situation worse |
| 8/11/2016 | TDOT | Pellissippi Pkwy (SR-162) | 09-647 | Limited Access must be considered for this project (Similar to the current Alcoa Hwy improvements). Most major accidents seem to be due to dr ivers and egress to/from this roadway. Widening to three lanes may be too l ate for a 20 year project. |
| 7/29/2016 | TDOT | Pellissippi Pkwy (SR-162)/Lovell Rd Interchange | 09-648 | Recent extension of merge lane makes this not as critical as Hardi n Valley interchange ,though longer merge lanes would help . For safety Nee d to move business park entrance to Lovel Rd. |
| 8/11/2016 | TDOT | Pellissippi Pkwy (SR-162)/Lovell Rd Interchange | 09-648 | This intersection has poor acceleration/deceleration lanes. Why su ch a curve instead of a straighter ramp coming off of the Parkway? Hardin V alley has the same poor design. Also, exit/on-ramps on the SW side of Lovel l with help with flow. The Lovell/Schaad Rd projects will increase traffic and the need for these projects. I believe that Knox County needs many road way improvements, but intersections are the top issue. Better flow designs at Knox intersections would drastically change traffic. |
| 7/29/2016 | TDOT | Pellissippi Pkwy (SR-162)/Oak Ridge Hwy Interchange | 09-649 | see this as particularly beneficial since corrects a major safet y and traffic flow issue. Interchange currently favors only traffic in some directions causing sudden stops, lane changes and the need to do Uturns. I f you really want to build some 5 lane roads, 5 lane Pellisippi through Sol way and make the Solway bridge 6 lanes. Since 9-11 when access was cut off to go to TN95 through ORNL, the Solway bridge is a constant bottleneck even as Oak Ridge employment drops |
| 8/11/2016 | TDOT | Pellissippi Pkwy (SR-162)/Oak Ridge Hwy Interchange | 09-649 | This intersection needs an option for NW bound Oak Ridge Hwy traff ic to turn south onto 162. Much traffic would be relieved from having to ta ke small back roads if this fix was completed. There are not many good opt ions to bring NW Knox County residents to West Knox |
| 8/29/2016 | TDOT | Pellissippi Pkwy (SR-162)/Oak Ridge Hwy Interchange | 09-649 | I don't see how widening Pellissippi Parkway interchange will solve the almost daily wreck that occurs in Solway. It seems like the most useful project would be to have metering lights or something similar to let the traffic break a bit every now and then through Solway. My observation is that after sitting on one of the side roads or businesses in Solway for over 10 minutes due to the unending traffic flow, the drivers eventually just pull out into the oncoming traffic on Oak Ridge Hwy. and take their chances. |

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| 8/31/2016 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-653 | Alcoa Highway is a scary and dangerous disaster. It needs to be fixed immediately! This needs to be a project of the highest priority! |
| 8/29/2016 | TDOT | Maryville Pk (SR-33) | 09-675 | Maryville Pike and Old Knoxville Highway need widening all the way. Definitely do so. Heavy traffic throughout the day. |
| 8/25/2016 | TDOT | Gov John Sevier Hwy (SR-168) | 09-677 | Personally, when I drive in this area it's a dead zone. I don& #39;t support spending money on road widening in an area that doesn't s eem to need it. |
| 8/11/2016 | Knoxville | Papermill Drive Complete Street | 09-689 | This road is the largest example in Knox County of why we should c harge impact fees for commercial developers putting in a development. MCKay s Books moving onto this road has been the main cause for congestion. If a turn lane were at their entrance, traffic would improve greatly. Knox Count y Schools is another organization that should consider traffic impact. Many schools' drop off/pick up lines shut down area roads. A traffic lane w ould improve congestion and safety. |
| 8/11/2016 | TDOT | I-75 Widening | 09-692 | Given the large volume of truck traffic on this stretch and the to pography, the trucks lead to bottlenecking of traffic. Since this project is being delayed until 2040, TDOT should restrict truck traffic to right la ne to provide some interim relief to traffic flow. |
| 8/30/2016 | TDOT | I-40/Gov John Sevier Hwy New Interchange | 09-693 | Please, NO! I would prefer updates to the existing Asheville highway exit (394). This exit already exists and could use some improvements before we think about adding another exit off of 40. |
| 8/11/2016 | Farragut | Campbell Station Road Improvements | 10-700 | This roadway has had too many fatalities! The rezoning of Hardin V alley Academy, brings a mass of inexperienced teen drivers down this danger ous road from Farragut. This road and Hardin Valley Road are ill-equipped f or the development to come. |
| 7/29/2016 | Oak Ridge | Emory Valley Road at Melton Lake Drive Roundabout | 13-101 | see this as particularly beneficial since corrects a major traff ic flow issue |
| 7/29/2016 | Oak Ridge | Tulane Avenue at Pennsylvania Avenue Roundabout Construction | 13-102 | see this as particularly beneficial since corrects a major safet y and traffic flow issue,many wrecks and near misses here, current signage is confusing |
| 8/31/2016 | Alcoa | North Park Blvd & Airbase Rd Safety Improvements | 13-210 | Alcoa Highway is a scary and dangerous disaster. It needs to be fixed immediately! |
| 7/29/2016 | Oak Ridge | Traffic Control & Communication System Upgrades | 13-802 | Don't see this as particularly beneficial since doesn't co rrect a major safety or traffic flow issue |
| 9/6/2016 | Maryville | Maryville Alcoa Advanced Traffic Management System Phase II | 13-808 | Maintaining and improving existing infrastructure is a worthwhile expenditure, rather that building new stuff that will need to be maintained, in my opionion. |
| 7/29/2016 | Oak Ridge | Oak Ridge Rails to Trails | 13-830 | Have been waiting for this to happen forever! A real boon to Oak R idge as a high quality community for recreation and healthy lifestyles (bik e commuting). Now if we can just prevent TDOT from ruining Haw Ridge trail system by putting a 5 lane highway next to it |

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| 8/28/2016 | Maryville | Maryville Citywide Greenways | 13-833 | I would love to see more greenway added. It has helped promote th e area as an attractive place to live, and it enhances community health by providing accessible, outdoor place to get exercise. Children, families, a nd retirees all seem to use it heavily. |
| 8/29/2016 | Maryville | Maryville Citywide Greenways | 13-833 | This is a great project! Would like to see it extended to all areas of Maryville, Alcoa and Blount county. |
| 8/30/2016 | Maryville | Maryville Citywide Greenways | 13-833 | This is a wonderful and necessary project, beneficial for the improvement of the well-being of many citizens of Blount County. The sooner this project is done, the better. |
| 8/30/2016 | Maryville | Maryville Citywide Greenways | 13-833 | I am in favor of extending our Maryville Greenways. This is a great asset to our city. It helps foster a healthy community and it also attracts people to visit or move here. Sincerely, Gabriel Cole |
| 8/31/2016 | Maryville | Maryville Citywide Greenways | 13-833 | Our Maryville/Alcoa greenway is a wonderful thing. Let's fund and build this extension, and keep up the maintenance so it stays wonderful for generations. |
| 8/25/2016 | Knoxville | First Creek Greenway - Downtown East | 13-844 | Personally, I fully support growing the greenway network East of d owntown. This half of the city is lacking the same facilities the rest of c ity enjoys. |
| 8/31/2016 | Knoxville | Fourth Creek Greenway | 13-846 | It is a shame that there is no bike -ped facility connecting neighborhoods to Lakeshore Park which is a high use park. This greenway should be high priority or develop a lower cost natural surface path. |
| 8/9/2016 | Oak Ridge | Solway Park and Ride | 17-1001 | Absolutely! We need more park and ride options throughout Knoxvill e but certainly for Knoxville-Oak Ridge commuters. |
| 8/5/2016 | KAT | KAT Implementation of ITS Technologies | 17-1009 | I would like to apply to bid for this project as we have the means to provide, install, manage and service this solution. We are a local comp any that would love the opportunity to help our community. I feel this woul d be a fast way to do so. Thank you. Best wishes, Jameson Chatman |
| 7/29/2016 | Oak Ridge | Emory Valley Road at Lafayette Drive Intersection | 17-101 | Don't see this as particularly beneficial since doesn't co rrect a major safety or traffic flow issue |
| 8/28/2016 | TDOT | US 129 Widening | 17-203 | I strongly support this project to improve traffic patterns in and around the Foothills Mall area. With continued commercial traffic in the area, any project which will improve safety and traffic flow should be funded. |
| 8/25/2016 | Knoxville | Cecil Ave and Broadway Realignment | 17-602 | The realignment of Cecil Ave is a major component of the Broadway Corridor Plan that will be made public in the coming months by the East TN Community Design Center. We gathered public input in the area and determine d this realignment would be a great benefit to the safety of cars and pedes trians of the shopping center and nearby neighborhoods. |
| 8/25/2016 | Knoxville | Magnolia Avenue Streetscape - Phase 1 | 17-606 | Personally, I can't wait to see this project come to life. Mag nolia is a great street that has been left out of the equation for too long . |
| 8/30/2016 | Knoxville | Magnolia Avenue Streetscape - Phase 3 and 4 | 17-608 | A great improvement for the area! Very excited this is a possibility! |

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| 8/30/2016 | TDOT | I-40 at Asheville Hwy (SR-9) Interchange | 17-612 | This exit is in need of some serious help. Trying to exit while 640 traffic enters the interstate is an absolute mess. It gets backed up. I feel as though increasing the storage for the eastbound exit lanes would be extremely helpful. |
| 8/25/2016 | Knoxville | East Knox Greenway - Phase 1 | 17-901 | Personally, I fully support growing the greenway network East of d owntown. This half of the city is lacking the same facilities the rest of c ity enjoys. Connecting the Botanical Garden would be a great incentive for people to use the greenways. |
| 8/29/2016 | Knoxville | East Knox Greenway - Phase 1 | 17-901 | Glad to see so many greenway efforts in the plan. It's important to not neglect East Knoxville where people are more reliant on public transit, cycling, and walkability. |
| 8/29/2016 | Knoxville | East Knox Greenway - Phase 2 | 17-902 | Glad to see East Knox routes proposed, but disappointed the Holston River piece is so far out in the timeline. |
| 8/31/2016 | Knoxville | Tyson Fort Sanders Bike Connection | 17-911 | This connection would drastically improve the bike-ped traffic to/from 3rd Creek greenway to the Fort Sanders neighborhood and destinations to the east and west. It is very unpleasant and uncomfortable now with no plans to improve the Cumberland Road bike connection from Tyson Park to Fort Sanders neighborhood. Riding on a sidewalk is a poor option and trying to ride on Cumberland is intimidating for most anyone and will continue to be so after the Cumberland project is finished. Many, many students are living in Fort Sanders with a lot of auto traffic around the hospitals and on Cumberland; there are no safe, convenient bike-ped connections |
| 7/29/2016 | Knoxville | Westland Drive Bike Lane | 17-913 | Definitely needed on this high traffic road especially since it co nnects to Lakeshore park |

# PUBLIC FEEDBACK - COMMENT PERIOD 2

## 72 Items Found (Nov. 2016 - April 2017)

| Date | Agency | Project Title | Project ID | Mesage |
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| 4/8/2017 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-216 | I can confirm that this project is needed to improve the safety surrounding the Alcoa Highway and Pellissippi Parkway interchange. The way the interchange is designed now really disrupts the traffic flow going North and Southbound on Alcoa Highway. People have to go from 50-60 MPH to 10 MPH when there is a queue to get onto Pellissippi Parkway (Northbound) or slow people merging onto Alcoa Highway (Southbound). If a driver is not paying close attention this could lead to a very dangerous situation. |
| 3/15/2017 | | Foothills Parkway | 09-224 | Adding new highways into largely roadless buffer arEas adjacent to or near the GSMNP is counterproductive to the aesthetic quality and eco-tourism that draws people to our area. It also interferes with large and small mammal migration and fragments the last remaining connected wild areas in these communities. I oppose any new highways in these areas. |
| 3/6/2017 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | $165,000,000+ is outrageous. There are so many more important improvements that are scheduled for 2030s-2040. We need improvement of our area roads NOW. The Pellissippi extension is a 4 mile road that is NOT needed. It will do nothing to relieve traffic on 129 or improve its safety as some officials try to convince us of. |
| 3/7/2017 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | I can't help but comment yet again on this ridiculous, most non-needed project ever in Blount County. We are destroying our valuable farm land daily--all in the name of what--getting places faster! We say we want to preserve our open spaces and farmland but yet projects like this one stay on the proposed list. With all of the other improvement projects in this area, we need to stop there. The price tag on this is astronomical and insane. I would think we could find many other worthy things to spend this kind of money on. Please remove this project FOREVER off the list! |
| 3/8/2017 | TDOT | Pellissippi Pkwy (SR-162) Extension | 09-232 | A colossal waste of money and resources. TDOT's own data shows that there will be little to no improvement in LOS. The money spent on this project could pay for ten other roadway projects that would have a greater impact on safety and traffic efficiency. The first thought is not given to the accumulating cost of maintenance and the available resources for enforcement of traffic laws when new miles of highway are added to the system. And you don't keep adding floors to your house when the foundation is crumbling! Fix existing roadways first. |
| 3/15/2017 | | Pellissippi Pkwy (SR-162) Extension | 09-232 | I oppose the Pellissippi Parkway and any extensions of it. It bisects our last large areas of ag land, wildland, and these communities in Blount County and is counter to reducing our GHG emmissions to improve air quality. Improving air quality in Blount County should be a priority for the health of not just the people but also for the surrounding environment. |

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| 3/15/2017 | | Montvale Rd (SR-336) Widening | 09-239 | I am unable to find how to place general comments for ALL projects listed for the 2040 plan. Please consider the following comments as such. Also, I sent these as questions to the planner. 1. Realizing this is a plan it may or may not have to follow the same laws as specific projects. However these projects are listed individually so they will need to follow all environmental regulations in place. How has Transportation ecology and conservation planning been incorporated into the planning process? Terrestrial and Aquatic surveys for species needs should be completed with appropriately designed and placed underpasses, overpasses, aquatic passages incorporated into these projects. East Tennessee is a biodiversity hotspot and it is our responsibility to keep it as such. 2. 30 years ago we discussed the need for a light rail system in the greater Knoxville metropolitan area. Specifically a light rail running between Maryville and Knoxville straight-up Alcoa Highway was highly suggested and discarded by the contractors and City officials. With this in mind, we now have increased traffic, increased air pollution reducing our health and quality of life. Comprehensive light rail system needs to be included in the 2040 plan. 3. Likewise bicycle and pedestrian paths and other alternative transportation needs to be expanded in this plan to reduce traffic. This includes not only providing safe and appropriately placed sidewalks, bicycle lanes and paths and safe crossings within city limits, and also bicycle lanes along the County Roads listed on these projects. Bicycle groups in the state of Tennessee designated bicycle routes through Blount County these definitely need to be included in the plan to ensure bicycle Lanes are built. 4. A wealth of information exists on conservation planning from Partners such as the nature conservancy, and the Appalachian landscape conservation cooperative. The al-sisi is currently working on a conservation blueprint, a fairly coarse plan but applicable to our area to look at broadscale connectivity for species needs and migration. How has the 2040 plan included this information? 5. Lastly I have created these comments using voice recognition and apologize for any typos present. Thank you for the opportunity to comment. |
| 2/24/2017 | | Montvale Rd (SR-336) Reconstruction | 09-249 | Hello and thank you for the opportunity to comment on this project. The mileage from Six Mile to Maryville city limits is more than 2.7 miles; please clarify the area that will be widened. Furthermore bicycle and pedestrian lanes will also be useful along this road instead of stopping at the city limits. Montville road is designated as a state highway and also as a state bicycle route. It will benefit drivers and cyclists to have true bicycle lanes. Thank you |
| 3/7/2017 | TDOT | Sevierville Rd (SR-35/US-411) Reconstruction | 09-250 | I would urge the powers that be that plan these projects to take into account what this project will do to many people who live along US 411 on this project route. Many of us are already almost living on US 411 anyway. Granted when our grandparents settled here, in my case almost 100 years ago, this road was dirt. I truely believe that if people would be more careful and pay more attention when they are driving and not be distracted and also SLOW DOWN projects like this would not be needed at all. I realize that this road is highly travelled but I believe the key to making it more safe is strictly PAY ATTENTION AND SLOW DOWN! |
| 4/11/2017 | TDOT | US-321 (SR-73) at US-11 (SR-2) Intersection Improvements | 09-410 | I feel this is going to be a good thing in the long run with the bridge being finished soon. The intersection probably needs some work done before it is turned to a 4 lane all the way through 321. |
| 4/11/2017 | TDOT | US 11 (SR-2) Realignment & Widening | 09-416 | This will really improve the traffic down highway 11, and am glad to see it getting done. The bicycle and pedestrian path will add to the community and I believe it will be a good addition to the community. |
| 1/10/2017 | Knoxville | Pleasant Ridge Road | 09-616 | The need for a continuing sidewalk is high and improved traffic flow during peak times, however, this road has neighborhood character so when expanding, try to keep the look of the road and don't turn it into another highway. |

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| 4/10/2017 | Knoxville | South Knoxville Waterfront Roadway Improvements | 09-617 | I think this is a great improvement to the area of South Knoxville. Many local business are opening along Sevier Avenue making it a popular place for people in South Knoxville as well as UT students to gather. An improvement to the streetscape could attract more people and help business along this road. Also the roundabout would help direct traffic at the Island Home intersection. Currently the turnings are confusing and potentially dangerous as to knowing who has the rightaway. |
| 4/11/2017 | Knoxville | South Knoxville Waterfront Roadway Improvements | 09-617 | Renovating the South Knoxville Waterfront to provide a smooth transition of traffic and mobility is a great way to increase passenger capacity and efficiency. New projects in South Knoxville will bring commuters and a growing student population in the area will lead to problems that need to be addressed; innovative traffic designs like the one Knox Co. has planned out are essential. |
| 4/11/2017 | Knox County | Schaad Rd Widening | 09-625 | I am concerned about the vehicular safety on Schadd Rd, because it is a tight road with head on traffic. There is a popular golf course on this road, Knoxville Municipal Golf Course, and Sunday traffic can become hectic; however, a 4 lane roadway would prevent these queues from backing up from oak ridge hwy. If nothing else is implemented, at least add a turning lane to keep the traffic moving steady. |
| 4/10/2017 | TDOT | Pellissippi Pkwy/Hardin Valley Interchange | 09-634 | My parents live near Harden Valley High school. My family uses this interchange ever day. In the morning from 7-9am the traffic is decently bad. But what is probably worse, is the traffic getting off pellissippi around 5-6pm. This is very congested and hectic. Also, another point I would like to say, is that the ramps getting on and off pellissippi are very bad. They require you to go about 30 mph in order to be safe while at the same time, cars around you are going about 55 mph in pellissippi parkway. |
| 4/11/2017 | TDOT | W. Emory Rd (SR-131) | 09-636 | I traveled this road every day last semester to attend classes at Pellissippi Community College. I live in Powell and had to commute to the campus every day for class. Out of all the times I traveled down W. Emory Rd, I never had traffic issues. Two lanes is plentiful for this section of roadway. The funding for this project should be highly reconsidered. It isn't a major necessity and queues are rarely a problem on this stretch of roadway. I'm not completely against the turning lane addition; however, to reconstruct the two lanes is not a proper use of funding. |
| 4/11/2017 | Knox County | Lovell Rd Widening (SR-131) | 09-637 | This project can be very beneficial for the area as it is located in an area that has an increasing pedestrian and bicycling community as well as a growing population that will increase the traffic flow. The finished parts of Lovell road are already experiencing much less traffic buildup |
| 4/11/2017 | | Emory Rd (SR-131) | 09-643 | I commute on this road every morning and afternoon and there is a lot of congestion during these times. I feel widening this road would tremendously improve travel by reducing this congestion and therefore decrease the amount of accidents that occur. |
| 11/29/2016 | TDOT | Northshore Dr (SR-332) | 09-645 | Such a dangerous road and such necessary improvements! Can't wait to see this one transform the neighborhoods along Northshore Dr. Will any SCM's be implemented along the project? Could be a great opportunity to do some innovative stormwater work and create a sort of complete street in the sense of handling all forms of traffic and also handling stormwater responsibly. |
| 1/10/2017 | TDOT | Northshore Dr (SR-332) | 09-645 | Yes yes yes!! Wish this project could happen sooner. I live downtown and work out near the junction of Northshore and Pellissippi. I'd love to have a feasible/safe option to bike, take public transit, or some combination thereof to work. Having a multi-use path or bike lanes through this section of Northshore will be a HUGE and much-appreciated improvement! |

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| 4/11/2017 | TDOT | I-75 at Emory Rd (SR-131) Interchange | 09-652 | During morning and rush hour this interchange is heavily congested by traffic due to the off ramps being over capacity. This leads to both a accident risk and a inconvenience to all commuters in this area. I feel like this is something that must be fixed in order to mitigate fatalities caused by these accidents. |
| 4/10/2017 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-653 | I think this is a very needed improvement for Alcoa Hwy. I take it almost every day during rush hour. It is however not a terrible commute. I think the pedestrian and bicycle accommodations are a good idea because of the outdoor recreation opportunities alone. Ideally one would expect a greenway along the shore of the river causing need for improved parking. This area has a lot of offer as far as natural attractions and recreation. Widening this portion would allow for vehicles to commute there allowing more people in other parts of Knox and Blount Counties to enjoy the outdoor benefits. |
| 4/10/2017 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-653 | This is an important improvement and I am glad it is being taken into consideration. Alcoa Highway can get very busy in this area at times and I think the additional lanes will benefit the area greatly |
| 4/11/2017 | TDOT | Alcoa Hwy (SR-115/US-129) Widening | 09-653 | The widening of Alcoa Hwy will decrease traffic. In addition, this will benefit commuter students from the University of Tennessee as they are able to get to school and back within a shorter period of time. |
| 4/11/2017 | Knoxville | Northshore Drive at Kingston Pike Intersection Improvements | 09-658 | What kind of intersection improvements are going to be made? Is it to improve the ability for drivers from Northshore to enter Kingston or for the traffic to exit Kingston to Northshore more easily? |
| 4/8/2017 | TDOT | I-75 at Callahan Dr Interchange | 09-661 | I understand that this would not be put into action for almost 15 years and that the population will have grown by then; however, I do not think that this project should be very high of a priority. There is rarely any queue to merge southbound onto the interstate at that location and the on ramp is long enough to gauge one's speed enough to safely merge into the Southbound traffic. |
| 2/10/2017 | TDOT | I-40/Gov John Sevier Hwy New Interchange | 09-693 | I don't support this interchange. There is already adequate access to John Sevier Hwy from I-40 via Asheville Hwy. |
| 4/10/2017 | Farragut | Kingston Pike (SR-1) at Campbell Station Rd Intersection Improvements | 10-699 | I think that the additional lane will help decrease traffic congestion. Hopefully the additional lane will also increase customer traffic to local businesses in that area. |
| 4/10/2017 | Farragut | Kingston Pike (SR-1) at Campbell Station Rd Intersection Improvements | 10-699 | Will the addition of another left bound turning lane aid in helping maintain a low capacity on this road? I would love to see some of the calculations done by the engineers being an engineering student myself. |
| 4/11/2017 | Farragut | Kingston Pike (SR-1) at Campbell Station Rd Intersection Improvements | 10-699 | I think that this is a good addition to the current intersection. The additional left turn lane will provide better flow, and it will reduce the amount of cars backed up. This addition looks expensive, but I believe it will be worth the cost, and it will make drivers happier. |
| 4/10/2017 | Knox County | Knox County Advanced Traffic Management System - Phase 1 | 13-816 | Severe congestion is a major issue during peak hours. It becomes borderline dangerous to exit businesses on the I40 end of the cedar bluff during these heavy flow time periods. (the section immediately preceding I40 if heading towards I40 from middlebrook pike) |
| 4/11/2017 | Oak Ridge | Oak Ridge Rails to Trails | 13-830 | I think that this is an excellent project. The city of Oak Ridge is a perfect spot to utilize bike paths and walking trails. Not only do these bike paths and walking trails provide fun activities for citizens, but they also encourage people to be healthy and appreciate their environment. |

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| 1/14/2017 | | Kingston Pike Sidewalk in Farragut | 13-834 | Definitely needed for safety!!! |
| 4/11/2017 | Knoxville | First Creek Greenway - Broadway Streetscape | 13-838 | This project is a step in the right direction for making Knoxville an even more accessible and attractive city. This area can be difficult to commute through, so improving the sidewalks will be a big help! |
| 4/11/2017 | Knoxville | First Creek Greenway - Broadway Streetscape | 13-838 | This project is a great step in making Knoxville more accessible and attractive. This area is especially difficult to commute through, and an improvement to the sidewalks will remove day to day complications for commuters, and could potentially boost local business and traffic. |
| 4/10/2017 | Knoxville | Knoxville South Waterfront Pedestrian/Bicycle Bridge | 13-852 | This would be amazing! I am a big runner and biker and currently the only way to go across the river from running on the greenway is over Henley or Gay street and both of these are loud. This would open up the river front so much and more people would be out by the river. This would then promote the river front even more. I strongly believe that this project should be a priority to Knoxville. Just look at the walking bridge is Chattanooga and how well that bridge has worked. |
| 4/11/2017 | Knoxville | Knoxville South Waterfront Pedestrian/Bicycle Bridge | 13-852 | The addition of this bridge will better connect living across the river with the university and increase safety for pedestrians or those without cars who bike to campus. |
| 4/11/2017 | Knoxville | Knoxville South Waterfront Pedestrian/Bicycle Bridge | 13-852 | This bridge will help commuter students attending the University of Tennessee. In addition, this will promote off-campus living across the river. |
| 4/11/2017 | Knoxville | Baker Creek Greenway | 13-854 | I personally would love to see this greenway put in. I've really enjoyed biking baker creek and would love to see new greenways connecting it to other nearby trails. |
| 1/10/2017 | Knoxville | Third Creek Greenway | 13-858 | This addition to the 3rd Creek Greenway is awesome. Would be a great way to connect the city and various parks. 3rd creek road has been blocked for a while now and is very scenic for a section of road within the city. Should consider simply turning it into a greenway and closing it as a road permanently. Would instantly add a large chuck of greenway to this project and protect a section of riparian area for 3rd creek (which desperately could use some). |
| 4/3/2017 | Knoxville | Atlantic Avenue Sidewalk | 13-880 | I've lived in Oakwood for 20 years. Many neighbors like to walk to nearby errands. I have walked and ridden a bicycle down Atlantic Avenue. This street is very hostile to pedestrians and desperately needs sidewalks. |
| 4/10/2017 | Knoxville | Kingston Pike Sidewalk | 13-883 | I think it is important to have sidewalks around this area because of the many students, who are more likely to walk or bike, in the area. I believe this would be a good project to consider more closely. |
| 4/10/2017 | KAT | Purchase KAT Vehicles - Fixed Route Buses | 17-1007 | I believe that advertising the routes and pricing of the KAT buses can increase the usage of the already existing buses and will also help create the need for more buses. Being new to this area, I can already that the roads around Knoxville have a very high capacity and a high demand. I would ride the KAT buses if I knew more information about them that way i could avoid queuing problems. |
| 4/17/2017 | KAT | KAT Implementation of ITS Technologies | 17-1009 | Having used public transit in Knoxville and other metropolitan areas I have realized some significant short-comings in our system. With the suggested improvement to bus location services would be a great help. This way user of the transit system will not be forced to wait for long periods of time for the bus. Also, with the addition of built-in wifi, milennials will hopefully be even more drawn to use public transit. |

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| 1/17/2017 | KAT | Purchase KAT Vehicles - Neighborhood Service Buses | 17-1010 | I strongly support this initiative, if it means that there will be neighborhood service that will connect to the trunk lines like route 11 |
| 1/17/2017 | KAT | Enhanced Transit Stop Connections | 17-1011 | Since it is listed as unfunded, I assume it won't go ahead, but it should. Transit needs to be made better and easier. |
| 3/8/2017 | TDOT | US 129 Widening | 17-202 | This area is alway congested for morning and evening commute times. It would be nice to see it widened to reduce traffic congestion. |
| 2/7/2017 | Knoxville | Asheville Hwy/Magnolia Ave/Rutledge Pk Intersection Study | 17-601 | these intersections going north and south at very dangerous in that you have to cross over to oncoming traffic to make a right or left turn. |
| 2/7/2017 | Knoxville | Cecil Ave and Broadway Realignment | 17-602 | yes this would be beneficial to allow direct access to Broadway shopping center. It will relieve traffic congestion going north and create faster access to the medical center and Fulton High School.. |
| 3/14/2017 | Knoxville | Cecil Ave and Broadway Realignment | 17-602 | I would love to see this happen. It's very difficult for people leaving the shopping center to cross 2 lanes of traffic to get into the left turn lane for Cecil Ave. We need to limit access to shopping areas to specific entrances instead of having multiple random entrances which increases congestion and decreases safety |
| 4/11/2017 | Knoxville | Cecil Ave and Broadway Realignment | 17-602 | I was unaware that this project was in planning, but I think it's a great idea. As a resident of the area, I am around this intersection often. The current configuration is inefficient and unsafe. |
| 4/10/2017 | Knoxville | Chapman Hwy Planning Study | 17-603 | I do not believe the light at the Fort Avenue intersection is necessary and I live off Chapman Highway. |
| 4/11/2017 | Knoxville | Magnolia Avenue Streetscape - Phase 1 | 17-606 | I am a proponent of any project that brings pedestrians, public transit commuters, and personal travel in an area. Adding raised medians, bike lanes, and improved signal timing will not only make the Magnolia Ave. area aesthetically pleasing, but the strip could lead to a hotbed for business and community involvement. |
| 2/10/2017 | Knoxville | Safer and Complete Streets Study | 17-609 | This project should have a much higher priority. It directly affects the quality of life of residents. |
| 4/11/2017 | Knoxville | South Waterfront Greenway - West of Suttree | 17-859 | This is a great idea to make travel along the TN River more pedestrian friendly and provide better access to the Knoxville parks. |
| 4/10/2017 | Knoxville | East Knox Greenway - Phase 1 | 17-901 | The Greenway is a safe place for many people to get their daily exercise. Added more connections adds more opportunities for people. This will give people more routes they can take and different options for them. |
| 1/10/2017 | Knoxville | Bradshaw Garden Drive Sidewalk | 17-906 | Would be a great asset to this neighborhood. There needs to be better walkability and connectivity in this part of the city. Would be great to be able to get from Victor Ashe area to Central Avenue. (Victor Ashe to Inskip Park and Sharps Ridge) |

| | | | | |
|---|---|---|---|---|
| 2/8/2017 | Knoxville | N. Broadway Sidewalk | 17-908 | I have a child in 3rd grade at Fountain City Elementary School who I drop off and pick up at school daily. We live 1.15 miles from school and he would absolutely LOVE to walk to school on nice days and I would gladly make it part of my routine to do so but it's not safe. Almost daily I see other very young(1st-4th graders) children who are within the "parental responsibility zone" crossing Broadway alone and it scares me to death. Once my son gets to 6th grade at Gresham Middle School he will be considered part of the "parental responsibility zone" unable to ride a school bus home. As Broadway stands right now, there is no way I would let him cross that road by himself. Matter of fact, I will not cross that road myself. Not only does Broadway need sidewalks but it also needs more crosswalk signals and side street crosswalk lines to make drivers aware of pedestrians as they navigate down Broadway. Once a year we get a letter from school encouraging us to attend a walk to school day. I've seen my neighbors park their cars in public parking lots near the school, after crossing Broadway, and walk their kids to school. If the city/county is going to push for more active lifestyles, we need safer ways to do so. |
| 1/17/2017 | Knoxville | Sidewalk Strategic Study | 17-909 | Our sidewalk situation is abysmal. I hope this study will show how badly they are need and there will be a response to that need. |
| 1/10/2017 | Knoxville | Tyson Fort Sanders Bike Connection | 17-911 | This is so needed. |
| 2/10/2017 | Knoxville | Tyson Fort Sanders Bike Connection | 17-911 | Long overdue and should receive highest priority. Students trapped in the high density Fort Sanders housing, unable to comfortably get to the greenway or even UT destinations. East-West connections for biking and walking break down here- the intersection at Publix, etc. is not safe for walkers and bikes. Volunteer blvd. has no bike lanes so greenway connection needs to be accessible from Fort Sanders |
| 4/8/2017 | Knoxville | Tyson Fort Sanders Bike Connection | 17-911 | I don't understand the need to spend money on a pedestrian bridge connecting fort sanders to Tyson Park. The proposed location will only reduce the travel distance by 2000 feet. I lived on Laurel Avenue for 3 years, and probably traveled to the Tyson Park greenway over 500 times, and I don't see any issues with the current access to Tyson Park through the sidewalk on Cumberland Ave/Kingston Pike. I think it could actually serve more harm than good from a safety standpoint. This bridge could serve as an under the radar escape route for people committing crimes in Fort Sanders. I think the Fort Sanders area needs to be studied deeper to see if there is another project that warrants attention before spending money on an unnecessary pedestrian bridge. |
| 4/10/2017 | Knoxville | Tyson Fort Sanders Bike Connection | 17-911 | It think it is a good idea to connect the people living in Fort Sanders to a park that they can go to without getting on Cumberland. Why is a half a mile section going to cost 5million dollars? |
| 4/10/2017 | Knoxville | Tyson Fort Sanders Bike Connection | 17-911 | I believe that a connection between Fort Sanders and Tyson Park is a great idea. It gives mores route options to more people. It's always a good idea to give people more place to walk or ride their bike. |
| 4/10/2017 | Knoxville | Tyson Fort Sanders Bike Connection | 17-911 | I think this is a good idea. I have sometimes desired a roadway that allows this short cut for vehicles but also realize the terrain and space accommodations would pose many problems. The bicycle/pedestrian cut through from Tyson Park to Fort Sanders would be greatly convenient for all the residents in the extremely crowded Fort to access outdoor recreation and exercise easily. For most of the residents in this area being college students, this is would provide a great outlet for "study-ers" to take a break and go outside. Tyson Park is really the only large park near the fort besides World's Fair but its location on the opposite side (east end) of the fort does not allow for a favorable destination for the area's west end residents. |

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|---|---|---|---|---|
| 4/11/2017 | Knoxville | Tyson Fort Sanders Bike Connection | 17-911 | I would personally love to see this greenway built. Currently the train tracks make it near very difficult to access tyson park from fort sanders. The fastest way currently is cumberland avenue, which because of the construction, has become less safe to bike through. |
| 4/17/2017 | Knoxville | Tyson Fort Sanders Bike Connection | 17-911 | I am a resident of the Fort Sanders Neighborhood and a frequent user of the Tyson park greenway. Due to the recent construction on Cumberland Ave it has become increasingly more dangerous to get to Tyson park by bike. Also, by car the entrance is very tricky to turn in to and very easy to miss. This project hopefully includes and auxilary parking lot along with a smooth path transition to the park itself. |
| 11/29/2016 | Knoxville | Westland Drive Bike Lane | 17-913 | Very excited about this project! Bike/pedestrian routes on Westland and Northshore are so so necessary! Wish it could happen sooner. |
| 4/4/2017 | Knoxville | Westland Drive Bike Lane | 17-913 | I would like to see a leg extended down to Rocky Hill Elementary. This could allow this route to link up with the bike/pedestrian infrastructure included in the Northshore Roadway plan (SR 332) & perhaps leverage Safe Routes to School funding. |
| 4/8/2017 | Knoxville | Westland Drive Bike Lane | 17-913 | This is a good idea ,in theory. I'm afraid it will be difficult if not impossible to obtain the necessary right of way from the properties along Westland Drive. This is all high-dollar real-estate, and the property owners probably won't sell a section of their property for right-of-way expansion. Beside's the right-of-way challenge, there is a significant amount of storm drainage along Westland Drive that would need to be considered accomodated, and there are multiple topographic challenges along this route as well. It would be a better use of money to construct a greenway along Westland Drive between Lawford Rd & Morell Rd. Cyclists can navigate through Lawford Estates and Westmoreland Heights. The public roads within those subdivisions are currently safe for cyclists. Upon exiting at Sherwood Drive, another short greenway can be constructed up to Lakeshore Park. Within the subdivisions, signs can be placed to guide cyclists along the route. |

## The following comments were submitted via email.

- Public Transportation to and from the airport is essential. Public transportation that is actually used and advertised in downtown Knoxville, west Knoxville and south Knox is essential. Getting to and from downtown, west and especially grocery shopping from Alcoa Highway is essential as is making the buses a lot more accessible and friendly to those who live outside the downtown areas, especially in places like Vestal and Bearden.
- I would very much like to see a continuous cycling/running path from West Knoxville to Downtown Knoxville. Currently, riders and runners have to cross Kingston Pike in traffic to do so. I'm not sure what the centers will serve, but I think it's less important to have facilities and resources than it is to have continuous bike paths. Please continue to develop them.
- Leapfrog UBER by working with Oak Ridge National Lab to develop software by which mass transit (bus or van) becomes a "many-to-many" model, using "hub and spoke," "just in time," etc. concepts.
- Tennessee Interfaith Power & Light appreciates this opportunity to comment on the Knoxville Regional Transportation Planning Organization's Mobility Plan 2040.
- Tennessee Interfaith Power & Light is a statewide interfaith partnership with a mission to spiritually respond to the challenges of the climate crisis through upholding the sacredness of all life, protecting vulnerable communities, and caring for the Earth. We manifest our spiritual values by reducing our carbon footprint within our daily lives, releasing the spiritual power of our faith communities, and advocating for transformative climate protection and justice policies.
- As pointed out in the Mobility Plan 2040:

  Suburban sprawl wastes farmland and natural areas so that today even though our region's population has increased 38% since 1950, our land use has increased 1200% so that per person we use three times the space that we did in 1950.

  84% of people drive alone in cars.

  A mere 6% of our community depends upon some means other than a car to get to work.

  We have no access to passenger rail service, a fact that does not even make a mention in the plan.

  Trucks transport more freight than trains, even though rail is 3-4 times more fuel efficient.

  Carbon emissions from cars and trucks exceed those emitted from power generation.

  The question posed in the plan, whether we should plan transportation to benefit people or vehicles, is insightful. Yet unmentioned within the plan is the enormous amount of money made by those who want more roads – the developers and road builders. Those who corporately and individually benefit financially from ever-more road construction are often the public officials who make the decisions how to invest transportation dollars or have an enormous influence over those who do.

The mobility plan reports that the community has a near consensus on the desire for more mobility options – more transit, more sidewalks, more bikeways. Yet when the rubber hits the road within the mobility plan, only 13% of our regional transportation dollars are to be invested in ways the people want.

Within the Knoxville region, we don't have choices. The only viable option most of us have to connect with work, stores, people and places is to get in a car. Without a car, the isolated have to depend upon friends and family, a struggling public transit system, or sufficient wealth to pay others to drive them.

Under the Trump Administration, many expect that highway planning will veer sharply off the course that it has been on for some time. Many of the rules and guidelines that have shaped this mobility plan may be rescinded or repealed or reversed. Much of what is groundbreaking within this mobility plan may no longer be supported by federal policy. The question arises whether the Knoxville Regional TPO will move toward its challenging goals it has set for itself. Or will local decision-makers, unfettered by environmental and equity concerns, accelerate developer-driven road construction?

Of course, the federal government under the Trump Administration will dismiss climate concerns as a factor in highway planning. The climate challenges that The Mobility Plan 2040 describes are real and will not disappear because they are ignored.

The climate discussion within the mobility plan can launch a conversation within TPO and among local decision-makers. It behooves local governments and planners to prepare for the new climate normal into which we have pushed ourselves.

Even though the state's transportation vulnerability analysis did not include increased precipitation as a risk factor for our region, those who manage storm water are fully aware of the effects of the increased downpours. Should TPO decide to further an internal climate conversation, we would encourage you to include this added vulnerability.

It was also good to see that the TPO would follow the FHWA guidelines and include GHG emissions as a performance measure. Even if that guideline is rescinded, it is not information lost as emissions can be estimated using either fuel consumed or VMT.

With the threat that this administration will undo federal environmental protection and equity guidelines, it will be up to local communities and decision makers to set a higher standard for both and keep the momentum of our region going in the direction pointed to by the Mobility Plan 2040.

Thank you again for this opportunity to comment.

# APPENDIX E
# PROJECT LIST
## Overview

The "Summary of Planned Investments" section in Chapter 3 of the Mobility Plan described the project selection process that was used to develop the fiscally constrained transportation project list for the TPO Planning Area out to the year 2040. This appendix contains a detailed listing of all projects proposed to be implemented and is organized in the two following significant ways:

1. The projects are grouped into one of three major categories:
    - Roadway Projects (Table E-1) – These projects predominantly involve some aspect addressing a need relating to motor vehicles such as increased safety, access or congestion reduction. It should be noted however that many roadway projects are subject to federal, state and local bicycle/pedestrian accommodation policies that at minimum encourage and sometimes require that appropriate facilities such as bike lanes and sidewalks are included with major roadway reconstruction projects.
    - Bicycle/Pedestrian Projects (Table E-2) – These projects predominantly involve construction of new infrastructure to increase accessibility for bicycle and pedestrian modes of transportation.
    - Transit Projects (Table E-3) – The list of transit projects in this section primarily represent investment by the TPO into transit capital improvements such as vehicle replacements utilizing the MPO federal transportation funding allocation under the Surface Transportation Block Grant program. These investments are above and beyond the normal operating and capital investment funding programs that are administered under Federal Transit Administration programs such as Section 5307 that are described in Chapter 5 and Appendix N of the Mobility Plan.
2. Within each of the three major project categories, the projects have been broken out into "horizon year" periods to reflect the projected completion time frame for each project. Several horizon year periods have been established between the present year (2017) and the ultimate horizon year (2040) of the Mobility Plan and are denoted in the project list by the ending year as follows:
    - Horizon Year 2022 – A project in this horizon year would expect to be complete and "open to traffic" at some point between the Plan beginning year (2017) and the end of calendar year 2022.
    - Horizon Year 2026 – Project to be completed between 1/1/2023 and 12/31/2026
    - Horizon Year 2030 – Project to be completed between 1/1/2027 and 12/31/2030

- Horizon Year 2034 – Project to be completed between 1/1/2031 and 12/31/2034
- Horizon Year 2040 – Project to be completed between 1/1/2035 and 12/31/2040

This appendix also includes a listing of unfunded projects, also known as an "Illustrative" project list in Table E-4. These projects have been identified as needs by jurisdictions within the TPO Planning Area, but were unable to meet the fiscal constraint requirement. Projects on this listing could potentially be shifted to the funded project list through a formal Plan amendment at such time that additional revenue may become available or if other needs and priorities change prior to the next full Mobility Plan update.

# Project List Table Descriptions

The project list is provided in this appendix in a tabular format. Following is a description of each element in the table in order to provide clarification and additional information in its use:

- KRMP ID – This is a unique project identification number that is given to each project for tracking purposes and map labeling. The first 2 digits of the ID number represent the origin of the project with respect to Mobility Plan update version. This system was first implemented with the 2009 Mobility Plan update and several projects from that Plan continue to be carried forward as indicated by any project ID beginning with "09". The next 3 digits in the project ID indicate the county where the project is located in the case of the roadway projects as follows:
  - 100's – Anderson County/Oak Ridge
  - 200's – Blount County
  - 400's – Loudon County
  - 500's – Sevier County
  - 600's – Knox County
  - 800's and above – indicate an ITS or non-roadway project
- Project Name – Indicates the primary project facility/roadway that is involved and possibly a short description of the type of work, e.g. "I-40/75 Widening".
- Termini – Lists the beginning and ending points of the project, typically major roadway intersections.
- Jurisdiction – Lists the geographic location of the project in terms of which municipal or county government the project lies in.
- Lead Agency – Lists the implementing agency, typically the municipal or county government where the project is located or TDOT.
- Length – The length of the project in number of miles where applicable. Note that a listing of "N/A" in this column could either mean "not applicable" such as the case of a planning study or "not available" such as the case of a spot intersection or interchange reconstruction project

in which the exact roadway segment length affected cannot usually be determined at the Mobility Plan project development stage.

- Project Description/Type of Improvement – Lists the major scope of work that is being proposed. Additional information on project types is provided in the next section.
- FY 17-20 TIP ID – If the project has a phase of work (Preliminary Engineering, Right-of-Way or Construction) that is programmed for funding within the current FY 2017-2020 Transportation Improvement Program then its TIP ID # will be included here.
- Horizon Year – As described in the previous section.
- Horizon Year Cost – This is the projected total cost of all phases of the project including both federal (if applicable) and state/local matching funds that has been inflated to the horizon year of implementation. The horizon year cost is derived by taking the current year estimated cost and applying an inflation factor for the number of years until project implementation.
- Proposed Funding Source – In order to determine fiscal constraint of the project list, the TPO had to assign a proposed funding source to each project to ensure that total costs would be less than or equal to total revenues. Several projects within the near term horizon years have had specific funding sources identified but in general the projects in future years are much less uncertain. Therefore, the TPO staff is making a best guess in several cases based on the project type and the eligibility restrictions of certain funding categories. Following are the major funding categories and the typical breakdown of federal funds and matching amounts:
    - Congestion Mitigation Air Quality Improvement (CMAQ) – Eligibility is generally limited to projects that can be demonstrated to reduce emissions an improve air quality. These projects are typically funded at 80% federal and 20% local funds. Certain traffic-signal related projects are eligible for 100% federal funds which affects several of these projects since signal timing improvement has been a major use of these funds in the TPO area.
    - Highway Safety Improvement Program (HSIP) – Eligibility is generally limited to projects directly related to a traffic safety issue. This is a federal program set up with a typical 90/10 split. The 10% match is typically provided using State funds since this program is administered statewide by TDOT and the TPO does not receive a separate direct sub-allocation of funds.
    - Surface Transportation Block Grant Program (STBG) – This federal funding program has the widest amount of eligibility and most project types can be funded through this program with the exception of roadway improvement on a non-federal aid roadway (local road system). The typical split is 80/20 for these funds with the 20% match typically provided by the State when a state maintained roadway is involved and by the Local agencies on non-state facilities. The TPO receives a direct sub-allocation of STBG funds that are denoted as “L-STBG” in the project list with the L representing “Local”.
    - National Highway Performance Program (NHPP) – Eligibility is generally limited to major projects involving a roadway that has been designated on the National Highway System (NHS). The typical split is 80/20 with the 20% match usually being provided by TDOT.

- Transportation Alternatives (TA) – This federal funding program is actually a setaside of the STBG program with a more limited eligibility of smaller projects promoting non-motorized forms of transportation. The typical split is 80/20 with the 20% match typically being provided by the local jurisdiction where the selected project is implemented.
- Local – There are a limited number of projects using 100% local funds that have been determined to be regionally significant that are included in the Mobility Plan for documentation purposes and to account for air quality conformity requirements.

# Project Description Definitions

In general the project description included in the following project lists has been summarized to the extent possible to be limited to the most significant elements of the project in order for brevity purposes since most projects include numerous specific aspects that do not warrant detailed listing. Another reason that the project description is summarized is that many of the projects have not undergone a detailed design process at this stage prior to the official project development process and a project description that is too descriptive at this stage may hinder a full range of alternatives analysis or end up being in conflict with the ultimately selected project elements. As a general rule, a roadway widening project will include facilities for bicycles and pedestrians, but it is often premature at the early planning stages to assume that these will be sidewalks and bike lanes or perhaps a combination of a multi-use path.

One of the primary uses of the project description is to determine its status for air quality conformity analysis requirements as either "exempt" or "non-exempt" from the requirement to demonstrate conformity. This exempt status is generally determined by whether or not significant roadway capacity is being added by the project. Project elements that are typically exempt from conformity such as addition of sidewalks or a turn lane at a single intersection may not be specifically called out in a project description in the Mobility Plan.

Further explanation of some of the primary generalized descriptions included in the roadway project list are as follows:

1. Construct New Roadway (any number of lanes) – Entails constructing a roadway on new location. Roadways that are envisioned to include full access control are denoted as a "freeway." The final design will determine the median configuration in terms of either a continuous center turn lane or non-traversable raised median and the accommodation of bicyclists and pedestrians.
2. Widen Roadway (from x lanes to y lanes) – Entails addition of motor vehicle capacity through construction of additional through travel lanes on an existing roadway. Multilane facilities will generally include either a non-traversable median or a center turn lane. The final design will determine the median configuration and accommodation of bicyclists and pedestrians through sidewalks and/or bike lanes.
3. Reconstruct 2-lane road – Entails the improvement of an existing 2-lane roadway to bring it

up to modern standards in terms of lane and shoulder widths and geometric design chiefly to enhance the safety of the roadway. This may also involve the construction of turn lanes at major intersections necessary for safety to remove stopped vehicles from the travel lanes. The final design will determine the median configuration and accommodation of bicyclists and pedestrians through sidewalks and/or bike lanes.

4. Add Center Turn Lane – Entails addition of a continuous two-way left turn lane on an existing undivided roadway of two or more lanes, also usually involves reconstructing the roadway to modern design standards for lane and shoulder width and geometric design. The final design will determine the median configuration and accommodation of bicyclists and pedestrians through sidewalks and/or bike lanes.
5. Replace Bridge – Entails the replacement of an existing bridge that has been determined to be structurally deficient. The new bridge may include safety enhancements such as wider lanes and shoulders, but will not have more through lanes than the previous structure had unless otherwise noted.
6. Intersection Improvements – Entails the modification of a single intersection to improve safety and operations including the possible addition of separate turn lanes, realignment of approaches or traffic signal.

# Project Maps by County

Following the tabular listing of projects proposed to be implemented in this Mobility Plan are separate maps for each county in the TPO Planning Area illustrating the project locations as labeled by the "KRMP ID". These maps are color-coded by horizon year. Note that these maps only include the projects that are readily able to be mapped and therefore do not include all projects such as the purchase of transit vehicles as an example.

**Table E-1:** Roadway Projects

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| **Horizon Year 2022** | | | | | | | | | | |
| 13-802 | Oak Ridge Traffic Control & Communication System Upgrades | Citywide | Oak Ridge | Oak Ridge | N/A | Replace traffic control and communication system. Installation of fiber network, vehicle detection, accessible pedestrian signals, traffic operations center and other components in a phased implementation period | 17-2017-053 | 2022 | $4,032,590 | CMAQ |
| 17-101 | Emory Valley Road at Lafayette Drive Intersection | Emory Valley Road at Lafayette Drive Intersection | Oak Ridge | Oak Ridge | N/A | Remove dedicated right turn lane from Emory Valley (west) to Lafayette Drive (north) with standard right turn lane. | | 2022 | $424,483 | HSIP |
| 18-100 | SR 61 at SR 62 Intersection at Winter Gap | SR-61 at SR-62 | Oliver Springs | TDOT | 0.0 | Replace outdated traffic signal equipment (controller, signal heads and detection) with modern equipment and either radar or video detection to avoid the problems with in pavement detection loops that are subject to breaking. It will also upgrade from span wire to mast arms | 17-2017-043 | 2022 | $225,000 | L-STBG |
| 18-101 | Clinton Traffic Signalization Improvements: Ph. 1 | Citywide | Clinton | Clinton | N/A | Signal Timing Update for each of the City's 15 traffic signals | 17-2017-052 | 2022 | $150,000 | CMAQ |
| 09-214 | Sevierville Rd (SR-35/US-411) Widening | Washington St (SR-35) to Walnut St | Maryville | TDOT | 0.4 | Reconstruct Sevierville Rd. (SR-35) from two lanes to three lanes, curb and gutter, and sidewalks with intersection improvements. | 17-2014-059 | 2022 | $9,500,000 | L-STBG |
| 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. | 17-2014-005 | 2022 | $66,993,000 | NHPP |
| 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 | $9,936,844 | Local |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 13-206 | Tesla Boulevard / Assoicates Boulevard Extended | Local Interstate Connector/ Associate blvd to East Edison/Springbrook Rd | Alcoa | Alcoa | 0.8 | Construct new 2 lane boulevard extension 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. | 17-2014-023 | 2022 | $10,378,614 | L-STBG |
| 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 | $7,352,569 | HSIP |
| 13-214 | Old Lowes Ferry Rd at Louisville Rd (SR-333) Intersection Improvements | Intersection of Old Lowes Ferry Rd at Louisville Rd (SR-333) | Blount County | TDOT | N/A | Realign intersection and add turn lanes | | 2022 | $609,653 | HSIP |
| 09-237 | E Broadway (SR-33) at Brown School Rd | Intersection of E Broadway (SR-33) at Brown School Rd | Maryville | TDOT | N/A | Realign intersection, add turn lanes and new traffic signal | | 2022 | $2,102,136 | HSIP |
| 13-211 | Foothills Mall Drive Extension Phase 1 | US-129 Bypass (SR-115) to Foch St. | Maryville | Maryville | 0.5 | 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 | 17-2014-007 | 2022 | $2,488,000 | L-STBG |
| 18-200 | Alcoa Hwy (SR-115/US-129) ITS Expansion | I-140 in Blount County to Cherokee Trail in Knox County | Blount/Knox County | TDOT | 7.4 | ITS Smartway Geographic Expansion | 17-2017-033 | 2022 | $3,000,000 | NHPP |
| 18-201 | I-140 ITS Expansion | Near MM 2 to Near MM 11 (SR-115/US-129/Alcoa Hwy) | Blount/Knox County | TDOT | 9.2 | I-140 ITS Expansion to include the installation of a power and communication network and ITS Devices such as CCTV cameras, DMS, and RDS | 17-2017-050 | 2022 | $4,700,000 | NHPP |
| 18-202 | Blount County Greenway Trail - Phase 1 | Heritage High School to Perry's Mill Parking area | Blount County | Blount County | 2.3 | Greenway trail contained completely within US Highway 321 right-of-way from Heritage High School to Perry's Mill Parking area. It will also include additional bike access link to Old Walland Highway across Melrose Station Bridge. | 17-2017-048 | 2022 | $1,161,741 | L-STBG |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 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. | 17-2014-077 | 2022 | $2,675,000 | CMAQ |
| 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 | 17-2017-005 | 2022 | $17,478,563 | NHPP |
| 17-203 | US 129/W. Broadway Avenue (SR-33/US-411) 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 | $4,041,420 | HSIP |
| 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 | $4,012,343 | HSIP |
| 09-223 | Carpenters Grade Rd Reconstruction and Intersection Improvements | Raulston Rd/Peterson Ln to Cochran Rd | Maryville | Maryville | 0.89 | Reconstruct 2-lane road with addition of turn lanes and sidewalk. Construct roundabout at Peterson Ln, Cochran Rd and Raulston Rd intersection. | 17-2017-042 | 2022 | $4,265,631 | L-STBG |
| 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 | 16.0 | Construct a new 2-lane roadway | | 2022 | $35,000,000 | TIGER |
| 18-400 | I-75 Exit 81 Interchange Lighting | I-75 at Exit 81 (SR-73/US-321) | Lenoir City | TDOT | 0.0 | Add high mast lighting to Interstate 75 at Exit 81 to improve safety conditions at night and during fog events. | 17-2017-041 | 2022 | $360,000 | L-STBG |
| 09-632 | Concord Road (SR-332) Widening | Concord Rd (SR-332) from north of Turkey Creek Rd. to Northshore Dr. | Farragut | TDOT | 0.93 | Widen 2-lanes to 4-lanes including pedestrian and bicycle improvements including a southbound right turn lane at Turkey Creek Rd. | 17-2014-058 | 2022 | $8,508,140 | L-STBG |
| 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 | 1.0 | Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities | 17-2014-082 | 2022 | $4,500,000 | L-STBG |
| 13-813 | Farragut Advanced Traffic Management System - Phase 1 | All 26 Signailzed Intersections within Town Limits | Farragut | Farragut | N/A | Upgrade signal communications and equipment at all signalized intersections within the Town to allow for a centrally controlled signal system | 17-2014-231 | 2022 | $2,925,000 | CMAQ |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 17-2017-030 | 2022 | $27,591,408 | Local |
| 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 | 17-2014-006 | 2022 | $10,612,080 | Local |
| 09-626 | Chapman Hwy (SR-71/US-441) Operational and Safety Improvements | Blount Avenue to SR-338 (Boyds Creek Highway) in Seymour | Knox County | TDOT | 10.3 | Intersection improvements and/or driveway improvements and/or left turn lanes at various locations throughout the project area. | 17-2017-040 | 2022 | $48,038,764 | NHPP |
| 09-626d | Chapman Hwy (US-441/SR-71) | Hendron Chapel Rd to Simpson Rd | Knox County | TDOT | 0.9 | Add center turn lane | 17-2017-040 | 2022 | $1,639,566 | HSIP |
| 09-634 | Pellissippi Pkwy/ Hardin Valley Interchange | Interchange at Hardin Valley Rd | Knox County | TDOT | N/A | Reconfigure existing interchange to improve capacity, safety and operations. Add new northbound on-ramp in northeast quadrant. | 17-2017-003 | 2022 | $1,500,000 | L-STBG |
| 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 | $6,367,248 | Local |
| 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 | The project is to design and implement advanced traffic management system on two priority roads - Maynardville Pk and Cedar Bluff Rd. | 17-2014-229 | 2022 | $1,428,000 | CMAQ |
| 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 | 17-2014-037 | 2022 | $5,000,000 | L-STBG |
| 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. | 17-2014-032 | 2022 | $9,020,268 | HPP |
| 09-618 | I-275 Industrial Park Access Improvements | Blackstock Ave: from W. Fifth Ave. to Bernard Ave., Marion St: from Bernard Ave. to Baxter Ave., 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. | 17-2014-001 | 2022 | $5,942,765 | HPP |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 09-623 | Pellissippi Pkwy (SR-162/I-140) and Dutchtown Rd Interchange | I-40 to Dutchtown Rd | Knoxville | TDOT | 0.4 | Widen Pellissippi Pkwy from 1 to 2 lanes westbound and lengthen storage of westbound off-ramp at Dutchtown Road interchange | | 2022 | $1,591,812 | HSIP |
| 09-628 | Alcoa Hwy (SR-115/ US-129) Widening | South of Topside Road to North of Maloney Road | Knoxville | TDOT | 2.2 | Widen from 4 to 6 lanes including pedestrian and bicycle facilities. | 17-2014-004 | 2022 | $45,738,065 | NHPP |
| 09-652 | I-75 at Emory Rd (SR-131) Interchange | I-75 at Emory Rd (SR-131) Interchange | Knoxville | TDOT | N/A | Reconfigure existing interchange to improve capacity, safety and operations. | | 2022 | $1,061,208 | HSIP |
| 09-661 | I-75 at Callahan Dr Interchange | I-75 at Callahan Dr Interchange | Knoxville | TDOT | N/A | Increase southbound off-ramp storage as part of the Ramp Queue Safety Program. | | 2022 | $827,742 | HSIP |
| 09-662 | I-75 at Merchant Dr Interchange | I-75 at Merchant Dr Interchange | Knoxville | TDOT | N/A | Increase northbound off-ramp storage as part of the Ramp Queue Safety Program. | | 2022 | $1,061,208 | HSIP |
| 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 | 17-2014-031 | 2022 | $3,700,000 | L-STBG |
| 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. | 17-2014-078 | 2022 | $1,770,000 | CMAQ |
| 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 | 19.0 | 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 | 17-2014-042 | 2022 | $6,000,000 | L-STBG |
| 17-601 | Asheville Hwy/ Magnolia Ave/ Rutledge Pk Intersection Study | N/A | Knoxville | Knoxville | N/A | Conduct a planning study to investigate multi-modal improvement options at this location | 17-2017-306 | 2022 | $250,000 | L-STBG |
| 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. | 17-2017-306 | 2022 | $250,000 | L-STBG |
| 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 | 17-2017-001 | 2022 | $4,804,260 | L-STBG |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 17-605 | Knoxville Center Mall Area Circulation Study | N/A | Knoxville | Knoxville | N/A | 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 | 17-2017-306 | 2022 | $250,000 | L-STBG |
| 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 | $4,775,436 | Local |
| 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 | $4,244,832 | Local |
| 17-609 | Safer and Complete Streets Study | N/A | Knoxville | Knoxville | N/A | 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 | 17-2017-306 | 2022 | $265,302 | L-STBG |
| 17-612 | I-40 at Asheville Hwy (SR-9) Interchange | I-40 at Asheville Hwy (SR-9) Interchange | Knoxville | TDOT | N/A | Increase eastbound off-ramp storage as part of the Ramp Queue Safety Program. | | 2022 | $1,061,208 | HSIP |
| 17-801 | Knoxville Advanced Traffic Management System - Phase 2 | Citywide | Knoxville | Knoxville | N/A | Additional upgrades of the City traffic signal system following Phase 1. | | 2022 | $7,428,456 | CMAQ |
| 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 | $4,669,315 | HSIP |
| 18-600 | I-75 ITS Expansion | MM 109.6 to just before SR-61 (Exit 122) | Knox/ Anderson County | TDOT | 13.03 | ITS Expansion | 17-2017-034 | 2022 | $2,200,000 | NHPP |
| 18-601 | I-40 ITS Expansion | West of Exit 398 to East of Exit 407 | Knox/Sevier County | TDOT | 11.4 | ITS Expansion to include the installation of a power and communication network and ITS Devices such as CCTV Cameras, DMS and RDS | 17-2017-035 | 2022 | $5,500,000 | NHPP |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 18-602 | Kingston Pike at Watt Road Intersection Improvements | Kingston Pike (US 11/70 (SR-1) at Watt Road | Farragut | TDOT | 0 | Intersection improvements at the intersection of Kingston Pike (US 11/70 (SR-1) at Watt Road. | 17-2017-045 | 2022 | $370,000 | L-STBG |
| 18-603 | Middlebrook Pike (SR-169) ATMS Expansion | Middlebrook Pike (SR-169)/University Ave. from College St. to Joe Hinton Rd. (6.5 miles) | Knoxville | Knoxville | 6.5 | Expand the City of Knoxville's Advanced Traffic Management System along Middlebrook Pike/Univesity Ave. | 17-2017-051 | 2022 | $2,430,000 | CMAQ |
| 18-604 | Knoxville Renewable Fueling Station | 1206 Proctor St. | Knoxville | TDOT | n/a | Upgrade fueling terminal for use with biodiesel | 17-2017-054 | 2022 | $132,000 | CMAQ |
| 18-605 | Knoxville and Holston River Railroad Locomotive Repower | n/a | Knoxville | TDOT | n/a | Repower 5 unregulated locomotives to Tier 4 Emissions Standards | 17-2017-055 | 2022 | $10,670,000 | CMAQ |
| 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 | $811,824 | HSIP |
| 13-402 | Queener Road Reconstruction | SR-72 to River Rd. | City of Loudon | City of Loudon | 0.7 | Reconstruct 2-lane roadway | 17-2014-009 | 2022 | $1,285,000 | L-STBG |
| 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 | 17-2014-083 | 2022 | $742,846 | L-STBG |
| 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 | 17-2017-307 | 2022 | $180,405 | L-STBG |
| 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 | 4.0 | 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. | 17-2014-079 | 2022 | $1,343,400 | CMAQ |
| 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 | 17-2014-070 | 2022 | $1,650,000 | L-STBG |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 | N/A | Intersection Improvements | 17-2014-034 | 2022 | $18,470,325 | NHPP |
| 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 | 17-2014-074 | 2022 | $10,718,201 | NHPP |
| 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 | 17-2014-015 | 2022 | $724,000 | L-STBG |
| 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. | 17-2014-232 | 2022 | $1,165,000 | CMAQ |
| 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 | $955,087 | HSIP |
| 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 | $795,906 | HSIP |
| 13-403 | Tellico Parkway at SR 72 | Intersection of Tellico Pkwy (SR-444) and Hwy 72 (SR-72) | Loudon County | Loudon County | N/A | Construction of 5 to 7 light standards along 1500 feet. Installation of aluminum poles, conduit, wiring, transformer and luminaries | 17-2014-019 | 2022 | $75,000 | L-STBG |
| 17-411 | Buttermilk Road Resurfacing | White Wing Rd to Knox County Line | Loudon County | Loudon County | 5.2 | Resurface roadway | 17-2014-076 | 2022 | $795,000 | L-STBG |
| 17-412 | Martel Road Resurfacing | Oak St to Knox County Line | Loudon County | Loudon County | 4.3 | Resurface roadway | | 2022 | $706,765 | L-STBG |
| 17-413 | Northshore Drive Resurfacing | Beals Chapel Rd to Knox County Line | Loudon County | Loudon County | 2.2 | Resurface roadway | | 2022 | $334,281 | L-STBG |
| 17-414 | Prospect Church Rd Resurfacing | Hwy 72 South to Hwy 72 North | Loudon County | Loudon County | 3.0 | Resurface roadway | | 2022 | $265,302 | L-STBG |
| 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 | $636,725 | HSIP |
| 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 | $463,748 | HSIP |
| 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 | 17-2014-033 | 2022 | $19,298,280 | NHPP |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| Total for Horizon Years 2017 - 2022 | | | | | | | | | $496,428,764 | |
| **Horizon Year 2026** | | | | | | | | | | |
| 09-101 | Edgemoor Road (SR-170) | SR-62 (Oak Ridge Hwy) TO SR-9/US-25W (Clinton Hwy) | Oak Ridge | TDOT | 6.2 | Widen from 2-lanes to 4-lanes with median and/ or center turn lane. Also includes bicycle/pedestrian facilities and a new bridge over the Clinch River. | 17-2017-037 | 2026 | $118,571,929 | S-STP |
| 13-101 | Emory Valley Road at Melton Lake Drive Roundabout | Intersection of Emory Valley Road at Melton Lake Dr | Oak Ridge | Oak Ridge | N/A | Construct roundabout | | 2026 | $1,042,777 | HSIP |
| 13-102 | Tulane Avenue at Pennsylvania Avenue Roundabout Construction | Intersection of Tulane Ave at Pennsylvania Ave | Oak Ridge | Oak Ridge | N/A | Construct roundabout | | 2026 | $1,042,777 | HSIP |
| 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 | | 2026 | $14,117,441 | L-STBG |
| 09-216 | Alcoa Hwy (SR-115/ US-129) Widening | Pellissippi Parkway in Blount County to Little River south of Topside Road in Knox County | Alcoa | TDOT | 2.4 | Reconstruct 4-lanes and 6-lanes, including a frontage road system, new interchanges at Singleton Station Road and Topside Road (SR-333), modify the existing SR-115 and SR-162 interchange, and build a multi-use path. | 17-2014-003 | 2026 | $94,904,410 | NHPP |
| 09-257 | Relocated Alcoa Hwy (SR-115/US-129) | Proposed interchange at Tyson Blvd. to Pellissippi Pkwy (SR-162) | Alcoa | TDOT | 2.9 | New alignment, four lane divided facility, construct an interchange at Pellissippi Parkway (SR-162) | 17-2014-035 | 2026 | $87,324,809 | NHPP |
| 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 | 17-2014-084 | 2026 | $70,299,563 | NHPP |
| 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 | 17-2014-060 | 2026 | $6,885,725 | L-STBG |
| 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 | 17-2014-025 | 2026 | $194,154,504 | NHPP |
| 09-240 | Sandy Springs Rd at Montgomery Ln Intersection Improvements | Intersection of Sandy Springs Rd at Montgomery Ln | Maryville | Maryville | N/A | Intersection improvements including turn lanes and new traffic signal | | 2026 | $1,228,227 | HSIP |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | 2026 | $4,527,186 | L-STBG |
| 09-245 | Sevierville Rd (SR-35/US-411) Widening | Everett High Rd to Maryville City Limits | Maryville | TDOT | 2.0 | Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/ pedestrian facilities | | 2026 | $20,531,655 | NHPP |
| 09-262 | Montvale Rd (SR-336) Widening | Montvale Station Rd to Lamar Alexander Pkwy (US-321/SR-73) | Maryville | TDOT | 0.6 | Widen existing roadway to 2-12 foot travel lanes with a 12 foot center turn lane including curb and gutter, sidewalk and a multi-use path | | 2026 | $14,997,240 | S-STP |
| 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 | | 2026 | $6,205,717 | L-STBG |
| 18-500 | Boyds Creek Highway (SR 338) at Old Knoxville Highway Intersection Improvements | Boyds Creek Hwy (SR 338) at Old Knoxville Hwy Intersection | Sevierville | TDOT | 0 | Reconfigure existing intersection to improve safety and operations through geometric layout changes, addition of turn lanes, and installation of a new traffic signal. | 17-2017-044 | 2026 | $985,000 | L-STBG |
| 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 | | 2026 | $10,196,834 | NHPP |
| 09-615 | Washington Pike | North of I-640 to Murphy Rd | Knoxville | Knoxville | 1.7 | Widen from 2 to 4 lanes | 17-2014-038 | 2026 | $20,792,212 | L-STBG |
| 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. | 17-2014-002 | 2026 | $17,574,891 | L-STBG |
| 09-647 | Pellissippi Pkwy (SR-162) | Edgemoor Rd (SR-170) to Dutchtown Rd | Knox County | TDOT | 6.0 | Corridor safety and capacity improvements to include access control, interchange reconstruction, frontage roads, auxiliary lanes and provision for a shared use path | | 2026 | $83,773,646 | NHPP |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 09-649 | Pellissippi Pkwy (SR-162)/Oak Ridge Hwy Interchange | Interchange at Oak Ridge Hwy (SR-62) | Knox County | TDOT | N/A | Reconstruct interchange to provide ramp for westbound to southbound movement | | 2026 | $12,888,253 | NHPP |
| 09-653 | Alcoa Hwy (SR-115/ US-129) Widening | Woodson Dr. to Cherokee Trail interchange | Knoxville | TDOT | 1.6 | Widen 4-lane to 6-lane including pedestrian and bicycle facilities. | 17-2014-069 | 2026 | $46,397,711 | NHPP |
| 09-658 | Northshore Drive at Kingston Pike Intersection Improvements | Intersection of Northshore Dr and Kingston Pk | Knoxville | Knoxville | N/A | Intersection Improvements | 17-2017-039 | 2026 | $13,708,415 | NHPP |
| 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 | 17-2017-015 | 2026 | $18,492,300 | L-STBG |
| 17-602 | Cecil Ave and Broadway Realignment | Intersection of Cecil Ave at Broadway | Knoxville | Knoxville | N/A | Realign Cecil Avenue at North Broadway to tie into the existing Broadway Plaza access just north of Cecil Avenue | | 2026 | $1,405,991 | HSIP |
| 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 | 17-2017-017 | 2026 | $11,716,594 | L-STBG |
| 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 | | 2026 | $995,910 | HSIP |
| 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. | | 2026 | $937,328 | HSIP |
| Total for Horizon Years 2023 - 2026 | | | | | | | | | $875,699,047 | |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| **Horizon Year 2030** | | | | | | | | | | |
| 09-204 | Pellissippi Place Access Road Extension | Pellissippi Place Existing Terminus to Wildwood Rd | Alcoa | Alcoa | 1.2 | Construct new 2-lane road with center turn lane or median and bicycle/ pedestrian facilities | | 2030 | $13,944,319 | L-STBG |
| 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 | $2,128,604 | L-STBG |
| 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 | $12,544,814 | L-STBG |
| 09-248a | Topside Road (SR-333) Improvements - Phase 1 | Wrights Ferry Rd to TVA Lab Rd | Alcoa | TDOT | 1.0 | Add continuous center turn lane | | 2030 | $1,273,450 | HSIP |
| 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 | $9,796,597 | S-STP |
| 13-218 | Middlesettlements Rd at Miser Station Rd Intersection Improvements | Intersection of Middlesettlements Rd at Miser Station Rd | Blount County | Blount County | N/A | Realign intersection and add turn lanes | | 2030 | $679,930 | HSIP |
| 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 | 17-2017-007 | 2030 | $2,037,212 | L-STBG |
| 09-629 | I-40/I-75/Campbell Station Road Interchange | Interchange of I-40/75 at Campbell Station Rd | Farragut | TDOT | N/A | Reconfigure existing interchange to improve capacity, safety and operations. | 17-2014-040 | 2030 | $48,503,907 | NHPP |
| 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 | $5,900,609 | NHPP |
| 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 | $77,189,634 | NHPP |
| 09-643 | Emory Rd (SR-131) | Maynardville Hwy (SR-33) to Tazewell Pk (SR-331) | Knox County | TDOT | 4.9 | Widen from 2-lanes to 4-lanes with median and/ or center turn lane, and including bicycle/pedestrian facilities. | 17-2017-036 | 2030 | $86,240,442 | S-STP |
| 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 | $24,096,594 | S-STP |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 09-654 | I-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. | 17-2017-038 | 2030 | $95,118,135 | NHPP |
| 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 | | 2030 | $70,630,052 | NHPP |
| 17-402 | Carding Machine Road Resurfacing | Highland Ave to SR-72 | City of Loudon | City of Loudon | 1.4 | Resurface roadway | | 2030 | $405,837 | L-STBG |
| 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 | $1,014,593 | L-STBG |
| 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 | $44,388,463 | NHPP |
| Total for Horizon Years 2027 - 2030: | | | | | | | | | $495,893,192 | |
| **Horizon Year 2034** | | | | | | | | | | |
| 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 | | 2034 | $21,999,962 | L-STBG |
| 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 | | 2034 | $7,820,074 | S-STP |
| 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 | | 2034 | $11,672,275 | S-STP |
| 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 | | 2034 | $44,599,542 | NHPP |
| 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 | | 2034 | $86,485,499 | S-STP |
| 09-651 | I-40/I-75/Watt Rd Interchange | Interchange at Watt Rd | Knox County | TDOT | N/A | Reconfigure existing interchange to improve capacity, safety and operations. | | 2034 | $27,455,714 | NHPP |
| 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 | | 2034 | $51,342,185 | NHPP |
| Total for Horizon Years 2031 - 2034 | | | | | | | | | $251,375,252 | |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| **Horizon Year 2040** | | | | | | | | | | |
| 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 | $15,920,294 | L-STBG |
| 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 | $7,539,470 | L-STBG |
| 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 | $4,546,999 | S-STP |
| 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 | $36,798,848 | L-STBG |
| 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 | $8,737,134 | L-STBG |
| 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 | $17,659,589 | S-STP |
| 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 | $12,468,023 | S-STP |
| 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 | $51,249,226 | S-STP |
| 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 | $7,399,817 | S-STP |
| 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 | $7,813,624 | L-STBG |
| 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 | $5,454,732 | L-STBG |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 09-630 | Virtue Road Reconstruction | Boyd Station Rd to Kingston Pk (US-70/SR-1) | Farragut | Farragut | 1.4 | Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities | | 2040 | $16,883,189 | L-STBG |
| 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 | $22,130,502 | NHPP |
| 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 | $26,885,496 | L-STBG |
| 09-636 | W. Emory Rd (SR-131) | Oak Ridge Hwy (SR-62) to Clinton Hwy (US-25W/SR-9) | Knox County | TDOT | 5.0 | Reconstruct 2-lane road with addition of turn lanes | | 2040 | $87,474,895 | S-STP |
| 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 | $36,375,992 | S-STP |
| 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 | $8,184,598 | S-STP |
| 09-679 | I-75 at Raccoon Valley Rd (SR-170) Interchange | I-75 at Raccoon Valley Rd (SR-170) Interchange | Knox County | TDOT | N/A | Reconfigure existing interchange to improve capacity, safety and operations | | 2040 | $16,672,330 | NHPP |
| 09-693 | I-40/Gov John Sevier Hwy New Interchange | New Interchange | Knox County | TDOT | N/A | Construct new interstate interchange | | 2040 | $30,313,327 | NHPP |
| Total for Horizon Years 2035 - 2040: | | | | | | | | | $420,508,085 | |
| Total for all Years: | | | | | | | | | $2,539,904,340 | |

**Table E-2:** Bicycle/Pedestrian Projects

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| **Horizon Year 2022** | | | | | | | | | | |
| 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. | 17-2014-081 | 2022 | $560,200 | TAP |
| 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) | Alcoa | 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. | 17-2014-028 | 2022 | $1,356,193 | L-STBG |
| 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 | 17-2017-006 | 2022 | $1,871,504 | TAP |
| 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 | 17-2014-010 | 2022 | $1,012,500 | L-STBG |
| 13-863 | Knox/Blount Greenway - Phase II | From U.T. Farm Entrance to Maloney Park on Ginn Drive | Knox County | Knox County | 0.65 | Construction of a multi-use trail that will connect Maloney Road Park on Ginn Drive to Alcoa Highway south of Maloney Road at the UT Farm Entrance where future pedestrian and bicycle facilities are slated for construction as part of the ongoing Alcoa Hwy | 17-2014-044 | 2022 | $1,451,975 | TAP |
| 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. | 17-2014-080 | 2022 | $2,210,000 | TAP |
| 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. | 17-2014-047 | 2022 | $630,500 | CMAQ |
| 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 | 17-2017-009 | 2022 | $2,653,020 | L-STBG |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 17-2017-308 | 2022 | $1,167,329 | L-STBG |
| 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 | 17-2017-011 | 2022 | $1,804,054 | TAP |
| 17-909 | Sidewalk Strategic Study | N/A | Knoxville | Knoxville | N/A | Conduct a planning study to determine and prioritize sidewalk needs in City of Knoxville. | 17-2017-306 | 2022 | $200,000 | L-STBG |
| 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" | 17-2017-308 | 2022 | $1,058,555 | TAP |
| 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 | 17-2017-308 | 2022 | $5,306,040 | L-STBG |
| **Total for Horizon Years 2017 - 2022** | | | | | | | | | **$21,281,869** | |
| **Horizon Year 2026** | | | | | | | | | | |
| 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. | 17-2017-305 | 2026 | $3,280,646 | TAP |
| 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 | | 2026 | $2,577,651 | TAP |
| 17-850 | South Waterfront Greenway - East of Suttree | Suttree Landing Park to Island Home Avenue Riverwalk | Knoxville | Knoxville | 0.6 | Construct riverwalk trail connecting the 0.10 mile section of cantilevered riverwalk along Island Home Avenue, to Suttree Landing Park riverwalk that is just east of Foggy Bottom Street along the Tennessee River. | 17-2017-308 | 2026 | $5,389,633 | L-STBG |
| **Total for Horizon Years 2023 - 2026** | | | | | | | | | **$11,247,930** | |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|---|---|
| **Horizon Year 2030** | | | | | | | | | | |
| 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 | 17-2014-073 | 2026 | $36,949,617 | L-STBG |
| 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 | $5,109,366 | TAP |
| **Total for Horizon Years 2027 - 2030** | | | | | | | | | **$5,109,366** | |
| **Horizon Year 2034** | | | | | | | | | | |
| 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 | | 2034 | $2,471,014 | TAP |
| 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 | | 2034 | $3,431,964 | TAP |
| **Total for Horizon Years 2031 - 2034** | | | | | | | | | **$5,902,979** | |
| **Horizon Year 2040** | | | | | | | | | | |
| 13-854 | Baker Creek Greenway | Maynard Glenn Park to Island Home Ave | Knoxville | Knoxville | 1.0 | Construct a new shared use path along Baker Creek, connecting Maynard Glenn Park, Mary James Park, to the proposed South Waterfront Greenway | | 2040 | $2,273,500 | TAP |
| 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 | $4,850,132 | TAP |
| **Total for Horizon Years 2034 - 2040** | | | | | | | | | **$7,123,632** | |
| **Total for all Years:** | | | | | | | | | **$50,665,775** | |

**Table E-3:** Transit Projects

| KRMP ID | Project Name | Jurisdiction | Lead Agency | Project Description/Type of Improvement | FY17-20 TIP ID | Horizon Year | Horizon Year Cost | Proposed Funding Source |
|---|---|---|---|---|---|---|---|---|
| **Horizon Year 2022** | | | | | | | | |
| 17-1001 | Solway Park and Ride | Oak Ridge | Oak Ridge | Improve and expand existing parking area located at the TVA boat launch along Edgemoor Rd (SR-170) to accommodate park and ride opportunities | 2016 CMAQ Application | 2022 | $159,807 | CMAQ |
| 13-861 | Knoxville-Knox CAC Transit Capital Project | CAC | CAC | Purchase of demand response transit vehicles for fleet replacement | 17-2014-204 | 2022 | $1,078,125 | L-STBG |
| 17-1005 | KAT Purchase of ADA Paratransit Vans | KAT | KAT | Purchase of ADA Paratransit Vans for fleet replacement or minor expansion | 17-2017-208 | 2022 | $498,960 | L-STBG |
| 17-1007 | Purchase KAT Vehicles - Fixed Route Buses | KAT | KAT | Purchase of fixed-route buses for fleet replacement or minor expansion | 17-2017-204 | 2022 | $4,158,000 | L-STBG |
| 17-1008 | Purchase KAT Vehicles - Fixed Route Trolley Buses | KAT | KAT | Purchase of fixed-route trolley buses for fleet replacement or minor expansion | 17-2017-206 | 2022 | $2,970,000 | L-STBG |
| 17-1009 | KAT Implementation of ITS Technologies | 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 | 17-2017-205 | 2022 | $1,000,000 | L-STBG |
| 17-1010 | Purchase KAT Vehicles - Neighborhood Service Buses | KAT | KAT | Purchase of neighborhood service buses for fleet replacement or minor expansion | 17-2017-207 | 2022 | $498,960 | L-STBG |
| 17-1006 | KAT Express Transit Service Enhancement - Broadway Transit Signal Priority Implementation | 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. | 17-2017-028 | 2022 | $6,786,425 | CMAQ |
| 17-1002 | ETHRA Transit Vehicle Replacement Project | ETHRA | ETHRA | Purchase of demand response transit vehicles for fleet replacement | 17-2017-002 | 2022 | $360,000 | L-STBG |
| **Total** | | | | | | | **$17,510,277** | |

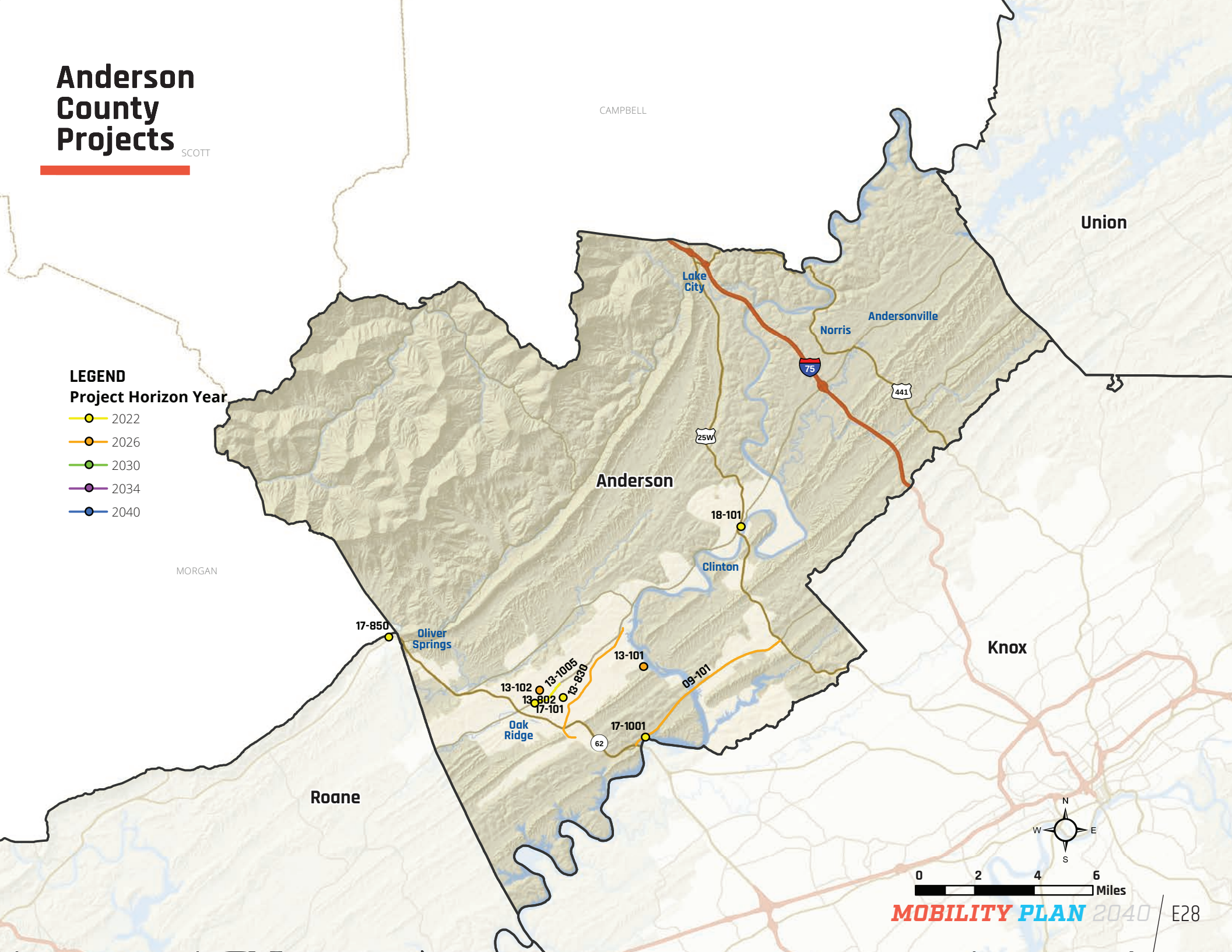
**Table E-4:** Unfunded Projects

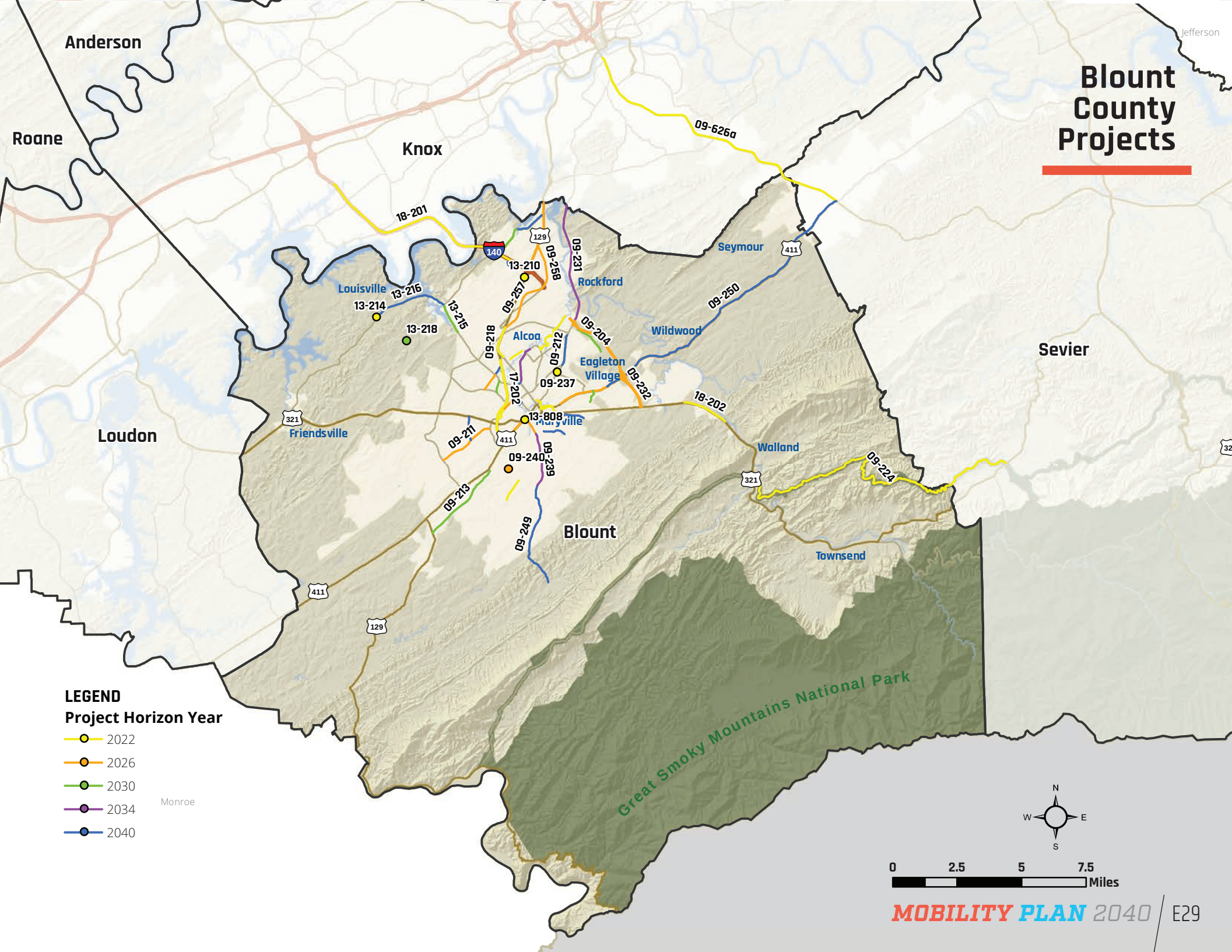
| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | Cost (2016 $) |
|---|---|---|---|---|---|---|---|
| 09-247 | Sam Houston School Road Improvements | Old Knoxville Hwy (SR-33) to Wildwood Rd | Alcoa | Alcoa | 2.7 | Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities | $20,147,400 |
| 13-209 | Bessemer Boulevard Phase 3 | N. Wright Rd to E. Hunt Rd (SR-335) | Alcoa | Alcoa | 1.1 | Construct 4-lane roadway on existing and new alignment with addition of bicycle/pedestrian facilities | $12,753,330 |
| 09-209 | Ellejoy Road Reconstruction | River Ford Rd to Jeffries Hollow Rd | Blount County | Blount County | 3.7 | Reconstruct 2-lane road with addition of turn lanes | $9,874,290 |
| 09-221 | Burnett Station Road Reconstruction | Sevierville Rd (SR-35) to Chapman Hwy (US-441/ SR-71) | Blount County | Blount County | 4.4 | Reconstruct 2-lane road with addition of turn lanes | $14,155,690 |
| 09-227 | Mentor Road Reconstruction | Louisville Rd (SR-334) to Wrights Ferry Rd | Blount County | Blount County | 3.2 | Reconstruct 2-lane road with addition of turn lanes | $7,317,280 |
| 09-229 | Morganton Road Reconstruction - Phase 2 | William Blount Dr (SR-335) to Walker Rd | Blount County | Blount County | 3.3 | Reconstruct 2-lane road with addition of turn lanes | $7,977,820 |
| 09-234 | Wildwood Road Reconstruction | Maryville City Limits to Sevierville Rd (SR-35) | Blount County | Blount County | 6.1 | Reconstruct 2-lane road with addition of turn lanes | $21,680,600 |
| 09-244 | Peppermint Rd Reconstruction | Wildwood Rd to Sevierville Rd (US-411/SR-35) | Blount County | Blount County | 1.1 | Reconstruct 2-lane road with addition of turn lanes | $2,732,980 |
| 09-246 | William Blount Drive (SR-335) Extension | US-411 S to Old Niles Ferry Rd | Maryville | Maryville | 0.6 | Construct new 2-lane road with sidewalks | $4,916,580 |
| 09-631 | Boyd Station Rd/Turkey Creek Rd Connector | McFee Rd to Turkey Creek Rd | Farragut | Farragut | 1.2 | Reconstruct 2-lane road and construct new bridge across Little Turkey Creek to Turkey Creek Road. | $9,895,310 |
| 10-700 | Campbell Station Road Improvements | Snyder Rd to Hardin Valley Rd | Farragut | Farragut | 3.1 | Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities | $28,351,090 |
| 17-611 | Parkside-Outlet Connector | Parkside Dr to Outlet Dr | Farragut | Farragut | 0.2 | Construct a 2-lane north-south connector roadway between Parkside Drive and Outlet Drive, across I-40/75. | $9,285,920 |
| 17-1011 | Enhanced Transit Stop Connections | N/A | KAT | KAT | N/A | Develop approximately 14,285 linear feet of sidewalk/ pedestrian connections to KAT fixed-route bus stops throughout the City of Knoxville. | $5,000,000 |
| 09-640 | Tazewell Pike (SR-331) | Murphy Rd to Emory Rd (SR-131) | Knox County | TDOT | 4.7 | Widen from 2 to 4 lanes | $65,248,790 |
| 09-641 | Tazewell Pike (SR-331) | Emory Rd (SR-131) to Barker Rd | Knox County | TDOT | 1.2 | Widen from 2 to 4 lanes | $18,000,000 |
| 09-677 | Gov John Sevier Hwy (SR-168) | Chapman Hwy (US-441/SR-71) to Asheville Hwy (SR-34) | Knox County | TDOT | 9.2 | Widen from 3 to 4-lane divided roadway | $66,600,000 |
| 09-681 | Raccoon Valley Rd (SR-170) | Norris Fwy (SR-71) to I-75 | Knox County | TDOT | 2.0 | Reconstruct 2-lane road with addition of turn lanes | $9,800,000 |
| 13-840 | Loves Creek Greenway | Spring Place Park to New Harvest Park | Knoxville | Knoxville | 2.0 | Construct new shared use path extending the Loves Creek Greenway from Spring Place Park to New Harvest Park | $2,400,000 |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | Cost (2016 $) |
|---|---|---|---|---|---|---|---|
| 13-841 | Old City Greenway | Worlds Fair Park to First Creek Greenway | Knoxville | Knoxville | 1.3 | Constructing a new shared use path through the Old City connecting Second Creek Greenway with First Creek Greenway | $2,500,000 |
| 13-845 | First Creek Greenway - Old Broadway | Old Broadway to Adair Park | Knoxville | Knoxville | 1.0 | Construct new shared use path extending First Creek Greenway to Sue Clancy Greenway | $1,800,000 |
| 13-846 | Fourth Creek Greenway | Weisgarber Rd to Lakeshore Park | Knoxville | Knoxville | 2.0 | Construct a new shared use path along Fourth Creek connecting Weisgarber Greenway to Bearden and Lakeshore Greenways | $3,700,000 |
| 13-847 | Jean Teague Greenway Extension | West Hills Elementary to Weisgarber Rd | Knoxville | Knoxville | 2.3 | Construct a new shared use path extending the Jean Teague Greenway to Weisgarber Greenway | $2,210,000 |
| 13-848 | Goose Creek Greenway | Mary Vestal Park to Fort Dickerson Park | Knoxville | Knoxville | 1.2 | Construct shared use path connecting City View Greenway to Mary Vestal Greenway and Fort Dickerson Trail | $2,100,000 |
| 13-849 | Second Creek Greenway | Grand Ave to Baxter Ave | Knoxville | Knoxville | 1.1 | Construct a new shared use path extending the Second Creek Greenway from Worlds Fair Park to Baxter Ave along Second Creek | $1,380,000 |
| 13-853 | Williams Creek Greenway | Williams Creek Urban Forest to Tennessee River | Knoxville | Knoxville | 1.4 | Construct new shared use path extending the Williams Creek Greenway from Brooks Ave to the proposed Tennessee River Greenway | $2,000,000 |
| 13-856 | Smoky Mountain Greenway | Mary Vestal Park to Gary Underwood Park | Knoxville | Knoxville | 2.7 | Construct new shared use path connecting Mary Vestal Greenway to Gary Underwood Park | $2,500,000 |
| 13-858 | Third Creek Greenway | Victor Ashe Park to Weisgarber Rd | Knoxville | Knoxville | 3.4 | Construct a new shared use path along Third Creek and Middlebrook Pike from Victor Ashe Greenway to Weisgarber Greenway | $5,380,000 |
| 13-881 | Cedar Lane Sidewalk | High School Drive to Inskip Norwood Rec Center | Knoxville | Knoxville | 0.7 | Construct a sidewalk on the north side of Inskip Drive from High School Road to the Inskip Norwood Recreation Center | $1,675,000 |
| 13-882 | Sheffield Drive Sidewalk | Wesley Rd to Portsmouth Rd | Knoxville | Knoxville | 1.9 | Construct sidewalk along Sheffield Drive from Wesley Road to Portsmouth Road | $1,400,000 |
| 13-883 | Kingston Pike Sidewalk | Neyland Dr to Towanda Trail | Knoxville | Knoxville | 1.7 | Construct sidewalk on Kingston Pike between Neyland Drive and Towanda Trail | $3,000,000 |
| 17-859 | South Waterfront Greenway - West of Suttree | Suttree Landing Park to City view Park | Knoxville | Knoxville | 2.0 | Construct shared use path connecting South Waterfront Greenway to various city parks | $3,000,000 |
| 17-902 | East Knox Greenway - Phase 2 | Knoxville Botanical Gardens to Holston River Park | Knoxville | Knoxville | 1.5 | Construct new shared use path connecting proposed East Knox Greenway - Phase 1 to existing Sarah Moore Greene and Holston River Greenways | $3,000,000 |
| 17-904 | Tennessee River Greenway | Riverside Landing Park to Holston River Park | Knoxville | Knoxville | 2.3 | Construct new shared use path from James White Greenway to Holston River Greenway | $13,100,000 |
| 17-905 | Amherst Road Sidewalk | 2000 Amherst Rd to Middlebrook Pk (SR-169) | Knoxville | Knoxville | 0.4 | Construct sidewalk on Amherst Road from 2000 Amherst Road to Middlebrook Pike. | $3,045,000 |
| 17-906 | Bradshaw Garden Drive Sidewalk | Pleasant Ridge Rd to Clinton Hwy | Knoxville | Knoxville | 1.3 | Construct sidewalk along Bradshaw Garden Drive from Pleasant Ridge Road to Clinton Highway | $2,310,000 |

| KRMP ID | Project Name | Termini | Jurisdiction | Lead Agency | Length (miles) | Project Description/Type of Improvement | Cost (2016 $) |
|---|---|---|---|---|---|---|---|
| 17-908 | N. Broadway Sidewalk | Old Broadway to Colonial Cir | Knoxville | Knoxville | 1.5 | Construct a sidewalk on the west side of N. Broadway from Old Broadway to Colonial Circle | $1,750,000 |
| 17-912 | W Inskip Drive Sidewalk | High School Drive to Inskip Norwood Rec Center | Knoxville | Knoxville | 0.7 | Construct a sidewalk on the north side of Inskip Drive from High School Road to the Inskip Norwood Recreation Center | $1,675,000 |
| 17-405 | US-11 Streetscapes and Drainage Improvement Project | Blair Bend Rd to 370' North of Cox Rd | City of Loudon | City of Loudon | 0.3 | Correction of drainage system along Highway 11 and installation of curb, gutter, lighting and landscaping. | $750,000 |
| 17-408 | Industrial Park Drive and C Street Resurfacing | US 11 West to US 11 East | Lenoir City | Lenoir City | 1.5 | Resurface roadway | $527,000 |
| **Total** | | | | | | | **$374,939,080** |

# Anderson County Projects




Blount County Projects
Anderson
Roane
Knox
Jefferson
Loudon
Sevier
Monroe
Blount
Louisville
Friendsville
Rockford
Alcoa
Eagleton Village
Maryville
Seymour
Wildwood
Walland
Townsend
Great Smoky Mountains National Park
18-201
09-626a
13-210
09-258
09-231
09-257
13-214
13-216
13-215
13-218
09-218
09-212
09-204
09-237
17-202
09-232
18-202
13-808
09-211
09-240
09-239
09-224
09-213
09-249
09-250
140
129
411
321
LEGEND
Project Horizon Year
2022
2026
2030
2034
2040
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0
2.5
5
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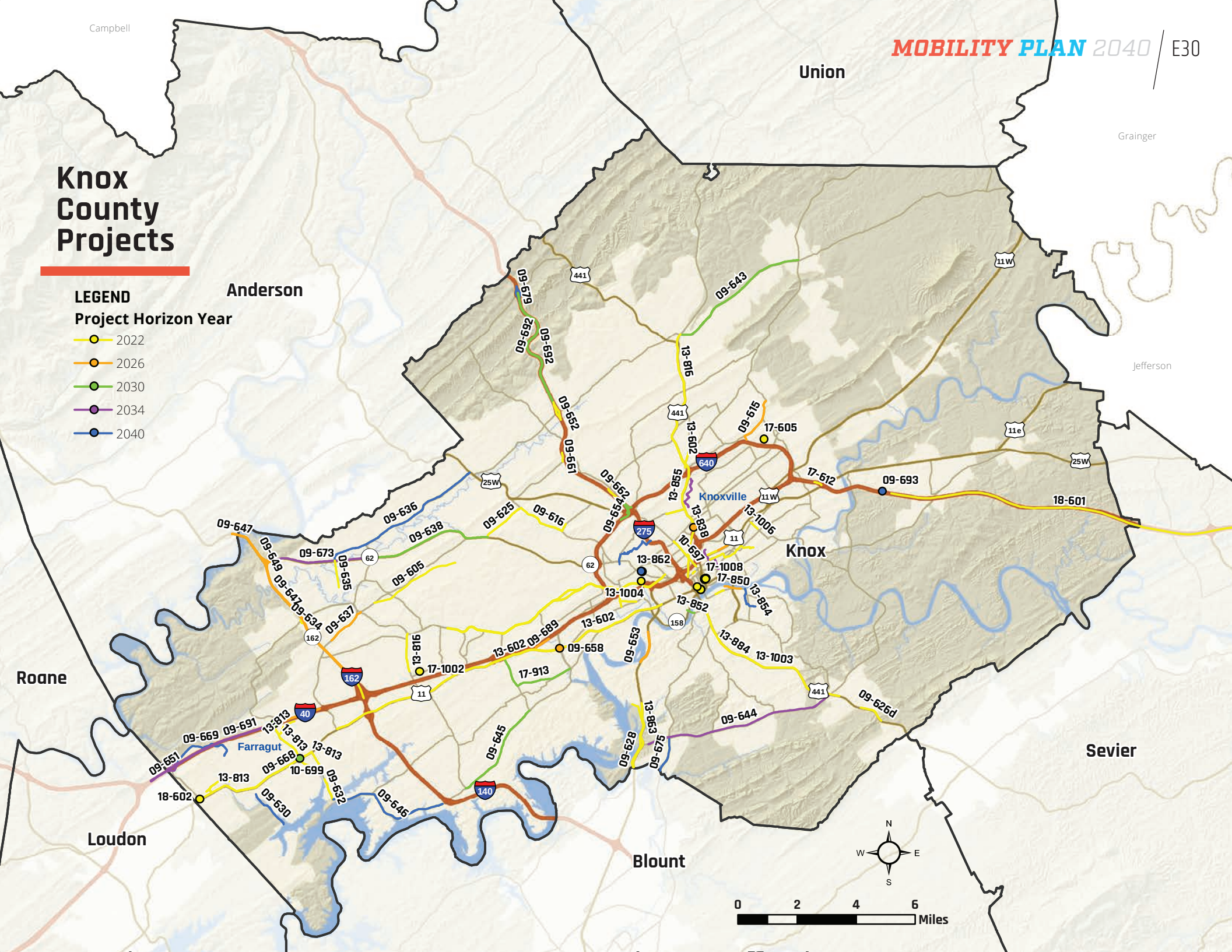
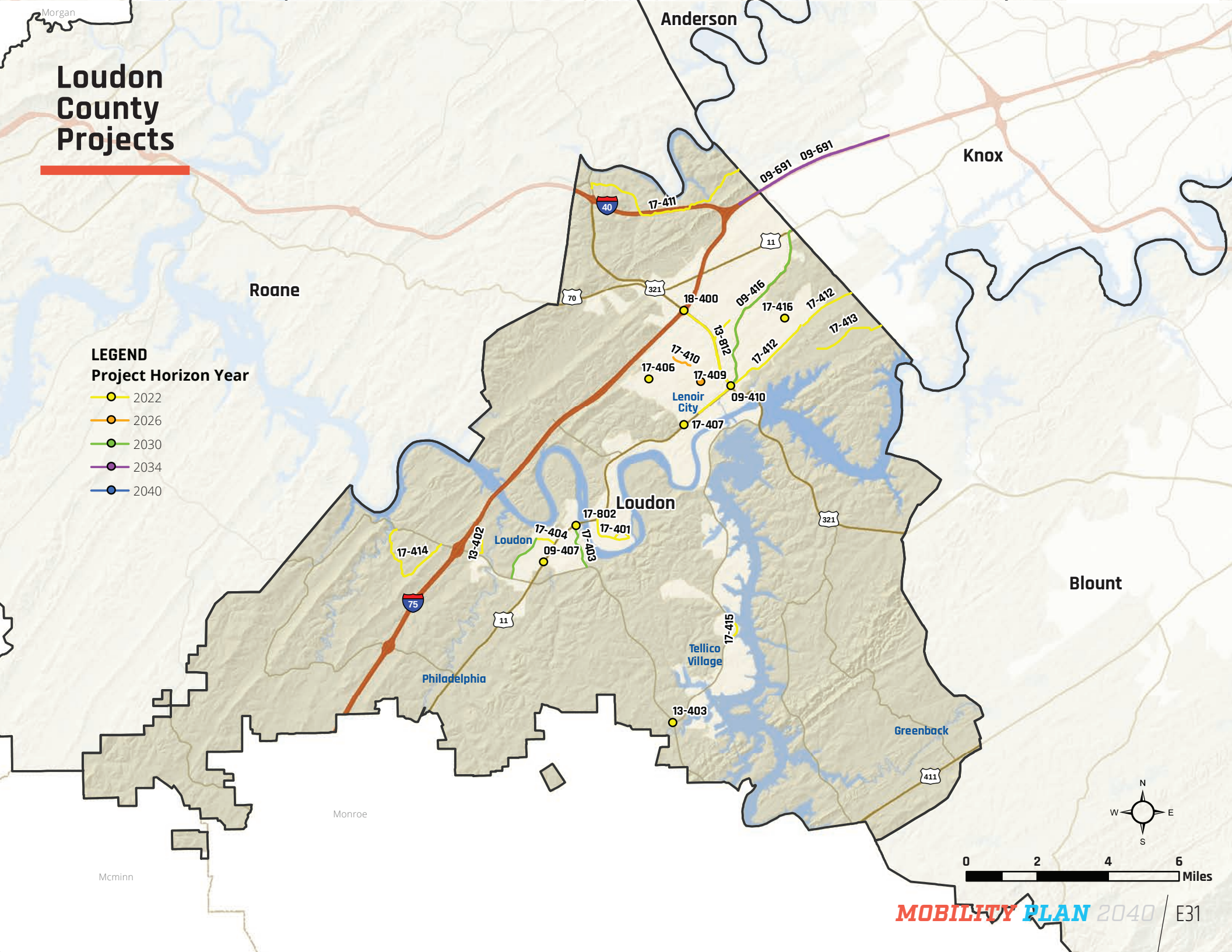
Miles

# Knox County Projects



# Loudon County Projects



# Sevier County Projects

# APPENDIX F
# MULTI-MODAL TRANSPORTATION SYSTEM OVERVIEW
## Public Transportation

### Knoxville Area Transit (KAT)

KAT is the largest provider of public transit in the Knoxville Region. KAT operates within the City of Knoxville, providing fixed-route bus service, downtown trolley circulators, and door-to-door paratransit service for the disabled. KAT's system consists of 26 routes and 2,000 stops served by a fleet of 74 buses, along with 20 demand-response vans.

In FY 2016, KAT provided approximately 3 million passenger trips. In June 2013, KAT made significant changes to its fixed-route system, increasing frequencies on core routes to 15 min. during peak (from 30 min.), while other secondary routes moved to 30 min. frequencies (from 1 hr). KAT continues to improve service frequencies and to provide later service on some routes. For the most up-to-date map and schedules, visit www.katbus.com.

### Fun Time Trolley

The City of Pigeon Forge operates the Fun Time Trolley system, with 6 routes serving the North Parkway, South Parkway, Gatlinburg's Welcome Center, Dollywood, Splash Country, and Wears Valley. The Fun Time Trolley's main office and trolley terminal is located at 186 Old Mill Ave., beside Patriot Park and just a few feet from the towns historic "Old Mill". Today with a fleet of more than thirty trolley buses and a few smaller cutaway buses the Fun Time Trolley services the city of Pigeon Forge and a portion of Sevierville.

### Gatlinburg Trolley

The Gatlinburg Trolley System provides service on 7 fixed routes throughout the City of Gatlinburg with connections to the Great Smoky Mountains National Park, Dollywood, and the Welcome Center.

### Knox County Community Action Committee (CAC) Transit

Knox County CAC Transit provides public demand-response transportation for Knox County. Some funding sources allow them to provide service to the general public, while other services are limited based on income or other eligibility requirements.

In FY 2015, CAC Transit averaged 765 trips per day, provided over 189,000 trips a year. CAC transit vehicles traveled 1.91 million miles. The majority of CAC Transit trip origins and destinations are within Knox County; however, some do begin or end outside of the county.

## Volunteer Assisted Transportation Program (VAT)

The Knoxville-Knox CAC operates this volunteer-based program that provides door-through-door transportation services to Knox County seniors and people with disabilities. These trips are for what is called "door-through-door" service, meaning the volunteer driver stays with the passenger and can provide extra help rather than just dropping a passenger off at the curb. A majority of the trips are for essential errands such as medical appointments or to pick up groceries. The VAT program also provides transportation counseling service by working one-on-one with clients to find them the best transportation options. Finally, the VAT program has the resources to contract with Knox County CAC Transit for group or coordinated trips for seniors and people with disabilities.

For FY 2015, 57 volunteers provided 6,047 trips. VAT contracted for another 1,822 rides and provided 631 people with transportation counseling or information.

## Blount County Senior Miles (SMiles)

The Blount County Community Action Agency (CAA) operates a similar volunteer-based program that provides transportation for seniors throughout most of Blount County. The SMiles program uses volunteer drivers who use their own vehicles to give rides to Blount County seniors for "door-through-door" service, as described above.

For FY 2015, 67 volunteers provided 5,036 trips. In FY 2015 SMiles increased the number of trips provided over FY 2014 by 36%.

## East Tennessee Human Resource Agency (ETHRA)

ETHRA provides demand-response transportation to residents of 16 counties in East Tennessee. ETHRA's primary focus is to serve residents who have no other source of transportation.

ETHRA operates 137 vehicles and provides 299,460 one-way trips a year. In FY 2015, 68% of ETHRA's trips were to medical appointments, 17% were to jobs, and 15% were miscellaneous categories.

## Oak Ridge Transit System

The Oak Ridge Transit System provides service throughout the City of Oak Ridge. Oak Ridge Transit operates three ADA-accessible mini-buses and a van.

The system provided 7,248 trips in FY 2015. The City of Oak Ridge also has a taxicab voucher program that helps offset the cost of fares for residents who are elderly or disabled.

# University of Tennessee Transit System

The University of Tennessee's transit system (The T) provides students, staff, faculty, and visitors with fare-free, campus-wide transportation. The T services campus and portions of the Fort Sanders neighborhood with four fixed routes and two on-demand routes. The T also offers a demand response service for disabled students. UT selected First Transit to operate the T, which began service June 1, 2013. The T provided 966,706 trips in FY 2015.

# Section 5310 Providers

Section 5310 refers to the FTA program known as Transportation for Elderly Persons and Persons with Disabilities. This program is administered by the TPO in the urban area and by TDOT for those areas outside the urban area. Section 5310 funding helps non-profit and/or local governmental agencies provide services or purchase vehicles for the elderly and persons who are disabled. Examples of organizations that have received these funds include: Sertoma Center, Cerebral Palsy Center, Loudon County Office on Aging and Senior Center, Ridgeview Behavioral Health Services, and the Emory Valley Center.

# Other Transit Providers

A variety of private transit services are available in the Knoxville region. These range from Greyhound and MegaBus, to school buses, charter, Tenncare, taxis, and Uber.

# Intermodal Transportation and Transit Facilities

Knoxville Area Transit operates out of an intermodal transportation center called John J. Duncan Jr. Knoxville Station Transit Center. Located at 301 Church Avenue in downtown Knoxville, the facility is the primary transfer location for all of KAT's fixed-routes. The national carrier MegaBus uses Knoxville Station as its boarding location in Knoxville. The facility also hosts KAT administrative offices. KAT operates the W. T. Crutcher Maintenance & Operations Facility located off of 1135 East Magnolia Avenue.

Knox County CAC Transit administrative offices are located in the LT Ross Building at 2247 Western Avenue in Knoxville. Knox County CAC Transit's uses the Knox County Fleet Service Center at 205 W. Baxter Avenue in north Knoxville as their maintenance center. ETHRA's administrative offices are located in west Knoxville at 9111 Cross Park Drive. ETHRA's maintenance facility is located in Loudon County at 298 Blair Bend Drive.

Greyhound is located at 100 East Magnolia Avenue. Currently, Knoxville has thirteen bus departures a day. Three KAT routes serve the corner of Magnolia and Central where Greyhound is located: routes 13, 20, and 24.

# Pedestrian Network

## This section describes the mileage of sidewalks compared to street mileage throughout the Knoxville Region as of 2016.

All data is from TRIMS – the Tennessee Roadway Information Management System – which is maintained by TDOT. The comparison of sidewalk mileage to street mileage is not meant to indicate the percentage of street miles with sidewalks, but rather to provide a sense of the proportion of sidewalk and street infrastructure in each jurisdiction. Street mileage figures exclude limited-access highways, which typically would not have sidewalks. Generally, sidewalks are found in older neighborhoods and in downtowns and community centers.

**Table F-1:** Streets And Sidewalks By Place (Miles) For Places With At Least 1 Mile Of Sidewalk

| Place | Road | Sidewalk | Sidewalk/ Road Ratio |
|---|---|---|---|
| Alcoa | 119.5 | 38.4 | 0.321 |
| Andersonville | 6.8 | 1.4 | 0.203 |
| Blaine | 32.3 | 2.6 | 0.081 |
| Clinton | 86.9 | 21.9 | 0.252 |
| Dandridge | 43.4 | 7.9 | 0.182 |
| Farragut | 145.6 | 72.2 | 0.496 |
| Gatlinburg | 104.7 | 16.5 | 0.158 |
| Harriman | 78.5 | 19.0 | 0.242 |
| Jefferson City | 68.6 | 16.8 | 0.245 |
| Kingston | 62.8 | 10.4 | 0.166 |
| Knoxville | 1,137.1 | 409.0 | 0.360 |
| Lenoir City | 79.4 | 16.1 | 0.202 |
| Loudon | 69.9 | 12.5 | 0.179 |
| Maryville | 178.8 | 68.6 | 0.384 |
| Maynardville | 29.1 | 8.2 | 0.281 |
| Morristown | 249.9 | 70.1 | 0.281 |
| Norris | 25.0 | 1.9 | 0.076 |
| Oak Ridge | 247.6 | 120.6 | 0.487 |
| Oliver Springs | 36.2 | 2.7 | 0.076 |
| Pigeon Forge | 94.1 | 37.6 | 0.400 |
| Rockwood | 63.2 | 15.8 | 0.250 |
| Rocky Top | 19.1 | 5.1 | 0.265 |
| Rutledge | 16.4 | 2.9 | 0.179 |
| Sevierville | 161.3 | 52.3 | 0.324 |
| Townsend | 12.5 | 2.3 | 0.187 |
| White Pine | 26.3 | 3.2 | 0.121 |
| Unincorporated Areas | 3,194.9 | 1,036.1 | 0.324 |

**Source:** *TRIMS*

**Table F-2:** Streets And Sidewalks By County (Miles)

| County | Road | Sidewalk | Sidewalk/ Road Ratio |
|---|---|---|---|
| Anderson | 879.1 | 137.4 | 0.156 |
| Blount | 1,376.8 | 116.2 | 0.084 |
| Grainger | 688.1 | 5.6 | 0.008 |
| Hamblen | 697.4 | 71.4 | 0.102 |
| Jefferson | 967.6 | 29.2 | 0.030 |
| Knox | 3,135.4 | 605.4 | 0.193 |
| Loudon | 815.3 | 42.1 | 0.052 |
| Roane | 1,016.3 | 62.2 | 0.061 |
| Sevier | 1,525.5 | 109.5 | 0.072 |
| Union | 536.3 | 8.2 | 0.015 |
| **Totals** | **11,637.9** | **1,187.3** | **0.102** |

**Source:** *TRIMS*

# Greenway Network

Below is an inventory of significant greenways within the Knoxville Region.

## Knoxville (49.3 miles total)

### Primarily Linear Greenways (37.5 miles total)

- Bearden Elementary School to Sequoyah Hills Park and Morningside Park (18.9 miles total)
  - Bearden Village Greenway (Sutherland Avenue; 2.1 miles)
  - Third Creek Greenway (Forest Park Boulevard to Lake Loudoun; 4.9 miles)
  - Sequoyah Greenway (median of Cherokee Boulevard; 2.6 miles)
  - Neyland Greenway (Neyland Drive from Volunteer Landing to University Club; 3 miles)
  - Knox/Blount Greenway (Neyland Drive to Marine Park along the Buck Karnes Bridge and the Tennessee River; 2.2 miles)
  - Second Creek Greenway (Neyland Greenway to World's Fair Park; 1.2 miles)
  - James White Greenway (Neyland Greenway to Morningside Greenway; 1 mile)
  - Morningside Greenway (James White Greenway to Haley Heritage Square; 1.9 miles)
- Cavet Station/Jean Teague/Ten Mile (5.8 miles total)
  - Cavet Station Greenway (East Walker Springs Lane to Middlebrook Pike; 1.2 miles)
  - Jean Teague Greenway (2.6 miles)
  - Ten Mile Greenway (Cavet Station Greenway to Wynnsong Theater [part of this greenway is in Knox County]; 2 miles)
- First Creek Greenway in First Creek Park (I-40 to Broadway along First Creek; 0.9 mile)
- Liberty Street/Middlebrook Pike (1.2 miles total)
  - Liberty Street Greenway (Middlebrook Pike to Division Street; 0.4 mile)
  - Middlebrook Greenway (Liberty Street to Proctor Street, 0.8 mile)
- Northwest/Victor Ashe/Pleasant Ridge (4.4 miles total)
  - Northwest Greenway (Northwest Middle School to Victor Ashe Park, 2 miles)
  - Pleasant Ridge Greenway (Northwest Middle School to I-640; 1.7 miles)
  - Victor Ashe Greenway (Victor Ashe Park, 0.7 mile)
- Papermill Bluff Greenway (Weisgarber Road/Lonas Drive to Papermill Drive/Kirby Road; 0.9 mile)

- Turkey Creek Greenway (Lovell Road to Farragut city limit [connects to Farragut's Parkside Greenway]; 0.8 mile)
- Weisgarber Greenway (Middlebrook Pike to Papermill Drive; 1 mile)
- Will Skelton Greenway (Ijams Nature Center to Forks of the River Wildlife Management Area; 3.6 miles)

## Smaller and Loop Greenways (11.8 miles total)

- Adair and Sue Clancy Greenways (Adair Park; 1.1 miles)
- Charter Doyle (Charter Doyle Park; 0.4-mile loop)
- Community Unity Greenway (Montgomery Village Housing Area; 0.6-mile loop)
- First Creek Greenway in Caswell Park (0.5 mile)
- Fountain City Greenway (Fountain City Park; 0.3-mile loop)
- Maple Drive Greenway (Fountain City Skatepark; 0.2-mile loop)
- Gary Underwood Greenway (Gary Underwood Park; 0.5-mile loop)
- Holston-Chilhowee Greenway (Holston Chilhowee Ballfields; 1 mile)
- Holston River Greenway (Holston River Park; 2.0-mile loop)
- Inskip Greenway (Inskip Park; 0.2-mile loop)
- Lakeshore Greenway (Lakeshore Park; 2.25-mile loop)
- Lonsdale Greenway (Lonsdale Park; 0.3 mile)
- Loves Creek Greenway (Holston Middle School; 0.25-mile loop)
- Malcolm Martin Greenway (Ed Cothran Pool; 0.3-mile loop)
- Mary Vestal Greenway (Mary Vestal Park; 0.4 mile)
- North Hills Greenway (North Hills Park; 0.4 mile)
- Sam Duff Greenway (Sam Duff Field; 0.25-mile loop)
- Sarah Moore Greene Greenway (Sarah Moore Greene Elementary School; 0.6 mile)
- Westview Greenway (Westview Park; 0.25-mile loop)

# Farragut (12.7 miles total)

- Anchor Park/Inverness/Turkey Creek (2.7 miles total)
  - Anchor Park loop (0.6 mile)
  - Inverness Greenway (two spurs from Turkey Greek Greenway to Bobolink Road and Banbury Road; 1 mile)
  - Turkey Creek Greenway (from Anchor Park along Turkey Creek Road; 1.1 miles)
- Campbell Station Park (0.8-mile loop)
- Fox Run Greenway (Everett Road to Brochardt Boulevard; 0.9 mile)
- Grigsby Chapel Greenway (Prince George Parish Drive to Farragut Primary School; 2.2 miles)
- Mayor Bob Leonard Park Trail (1.4-mile loop)
- McFee Greenway (along McFee Road from Boyd Station Road; 1.5 miles, plus a 0.5-mile loop in McFee Park)
- Parkside Greenway (Parkside Drive to Knoxville city limit [connects to Knoxville's Turkey Creek Greenway]; 1.2 miles)
- Rockwell Farms Greenway (Rockwell Farms Lane to edge of property; 1.5 miles)

# Knox County (10.2 miles total)

## Primarily Linear Greenways (7.55 miles total)

- Concord Greenway (along Northshore Drive in Concord Park, plus a walking loop; 1 mile)
- Halls Greenway (from Halls Community Park along Beaver Creek to Halls Library and to several neighborhoods; 1.25 miles)
- Howard Pinkston Greenway (from French Memorial Park and Howard Pinkston Library to Bonny Kate Elementary School, with a loop at the park; 0.6 mile)
- Pellissippi Greenway Trail (south from Pellissippi State Community College along Pellissippi Parkway; 1 mile)
- Powell Greenway (Emory Road from Powell High School to Powell Middle School; 1.5 miles)
- Sterchi Hills Greenway (from Knox County/AYSO Soccer Complex to Tommy Schumpert Park; 2.2 miles)

## Smaller and Loop Greenways (2.66 miles total)

- Beverly Loop (Beverly Park; 0.6 mile)
- New Harvest Loop (New Harvest Park; 0.25 mile)
- Mascot Park Loop (0.28 mile)
- Carl Cowan Loop (Carl Cowan Park; 0.28 mile)
- Parkey Strader Loop (Concord Park; 0.45 mile)
- Ball Camp Loop (Nicholas Ball Park; 0.8 mile)

# Alcoa & Maryville (16.4 miles total)

- Alcoa Greenways ***(12 miles total)***
  - Main spine (connecting Springbrook Park, Springbrook Road, Springbrook Corporate Center Park, Louisville Road, and the Maryville Greenway; 10 miles)
  - Clayton Greenway (from Alcoa Trail to McNutt Avenue, with a spur to Clayton Homes headquarters; 1.2 miles)
  - Pellissippi Place Greenway (along Jackson Hills Drive near entrance to Pellissippi Place; 0.8 mile)
- Maryville Greenways (4.4 miles total)
  - Greenbelt Park loops to Lamar Alexander Parkway (2.2 miles)
  - Lamar Alexander Parkway to Foothills Elementary School (2.2 miles)

# Townsend (9 miles total)

- Townsend Greenway (Along Lamar Alexander Parkway from Walland Highway bridge to Towns End Lane; 9 miles)

# Lenoir City (1.75 miles total)

- Town Creek Greenway (from Broadway along Town Creek to Lenoir City Middle School; 1.75 miles)

# Loudon (0.14 miles total)

- City of Loudon Greenway (along Mulberry Street from near Poplar Street to the waterfront; 0.14 mile)

# Sevierville (6.4 miles total)

- Memorial River Greenway (from Sevierville City Park to Burchfiel Arboretum; 2.2 miles)
- Municipal Complex Greenway (loop around Municipal Complex; 0.6 mile)
- Veterans Boulevard Greenway (Dolly Parton Parkway to Center View Road/Pigeon Forge city limit; 3.6 miles)

# Pigeon Forge (4 miles total)

- North Riverwalk Trail (from Patriot Park to north along the West Prong of the Little Pigeon River; 1.5 miles)
- Veterans Boulevard Greenway (Sevierville city limit to McCarter Hollow Road/Dollywood; 1.3 miles)
- City Park Trail (loop around Pigeon Forge City Park, 0.7 mile)
- South Riverwalk Trail (from Dollywood Lane to Day Springs Road along South River Road, 0.5 mile)

# Oak Ridge (8.9 miles total)

- Emory Valley Greenway (along Emory Valley Road from Briarcliff Road to Melton Lake Drive; 3.3 miles)
- Melton Lake Greenway (along Melton Lake Drive and Edgemoor Road from Oak Ridge Turnpike to Haw Ridge Park; 5.6 miles)

# Roadways

## This section provides a broad "planning-level" assessment of the existing and projected conditions of the major roadway network within the Knoxville TPO Planning Area based on evaluating a Build and No-Build scenario with the use of the TPO travel demand forecasting model.

Future projections of land use (population, employment, school enrollment and other socioeconomic characteristics that affect travel behavior) were input to the travel demand model in order to test the potential impacts on roadway system performance and congestion assuming that no improvements are made. This analysis essentially enables us to see what might happen in terms of the level of congestion on the roadway network if all expected future population and employment growth out to year 2040 suddenly appeared tomorrow.

The analyzed roadway network for the "No-Build" scenario is known as the "Existing plus Committed", or E+C, network. The E+C network represents the roadway characteristics in place in the year 2014 (the current travel model base year) and adds any improvements that have been completed since that time as well as improvements that are considered to be committed. The TPO is using the definition of "committed" to be that a project has construction funds fully programmed in the first fiscal year (FY 2017) of the current FY 2017 – 2020 Transportation Improvement Program (TIP). The following table lists the projects that are considered committed as well as those that are already under construction or have recently been completed (since 2014) that significantly affect roadway capacity and hence are able to be represented in the travel demand model.

**Table F-1:** Existing Plus Committed Projects

| Project ID | Roadway | Jurisdiction | Termini | Project Description | Status |
|---|---|---|---|---|---|
| 09-409 | US Hwy 321 (SR-73) | Lenoir City (TDOT) | US Hwy 11 (SR-2) to east of Little TN River | Construct 4-lane road on existing and new alignment | Under Construction |
| 09-603 | Emory Rd (SR-131) | Knox County (TDOT) | Clinton Hwy to Gill Rd | New 4-lane road w/center turn lane | Completed in 2015 |
| 09-604 | Maynardville Hwy (SR-33) | Knox County (TDOT) | Temple Acres Dr to Union County Line | Widen 2-lane to 4-lane w/ center turn lane | Under Construction |
| 09-610 | Western Ave (SR-62) | City of Knoxville (TDOT) | Texas Ave to Major Ave | Widen 2-lane to 4-lane w/ center turn lane | Under Construction |
| 09-611 | I-640/Broadway Interchange | City of Knoxville (TDOT) | Interchange and connecting roadways | Reconstruct interchange to improve westbound on and off ramps including a new on-ramp from northbound Broadway to westbound I-640. Increase access at the I-640 ramp connections with Broadway, Old Broadway and Tazewell Pike. | Under Construction |
| 09-612 | Western Ave (SR-62) | City of Knoxville (TDOT) | Schaad Rd to I-640 | Widen 2-lane to 4-lane w/ center turn lane | Under Construction |
| 09-613b | Cumberland Ave | City of Knoxville | 22nd St to 17th St | Road Diet - Convert 4-lane to 3-lane | Under Construction |
| 09-618 | I-275 Industrial Park Access Improvements | City of Knoxville | Various | Roadway and intersection improvements to enhance access to I-275 Business Park | Committed |
| 09-627 | Alcoa Hwy (SR-115) | City of Knoxville (TDOT) | Maloney Rd to Woodson Dr | Widen 4-lane to 6-lane | Under Construction |
| 09-632 | Concord Rd (SR-332) | Knox County (TDOT) | Turkey Creek Rd to Northshore Dr (SR-332) | Widen 2-lane to 4-lane w/ median & center turn lane | Committed |
| 09-633 | Parkside Dr | Knox County | Mabry Hood Rd to Hayfield Rd | Widen 2-lane to 4-lane w/ center turn lane | Under Construction |
| 10-697 | North Central St | City of Knoxville | Woodland Ave to Depot St | Road Diet - Convert 4-lane to 3-lane | Committed |
| 13-201 | Alcoa West Plant LIC Rd | City of Alcoa | Hall Rd (SR-35) to Mill St | Construct new 4-lane road | Committed |
| 09-508 | Chapman Hwy (SR-71) | Sevier County (TDOT) | Boyds Creek Hwy (SR-338) to Macon Ln | Add Center Turn Lane | Committed |

The roadway system performance can be described using different measures. The most commonly used measure is the "Level of Service" (LOS), which is documented in the Highway Capacity Manual by the Transportation Research Board. LOS is a qualitative measure that describes operational conditions within a traffic stream and their perception by motorists. It is based on a grade-letter system similar to a student's report card with "A" representing a free-flow roadway and "F" representing heavy traffic and forced flow conditions. For the purposes of the Mobility Plan, a planning-level LOS analysis is most appropriate, which bases the LOS on the peak hour volume-to-capacity (V/C) ratio of the roadway. The V/C ratio describes the amount of traffic volume that can be effectively accommodated based on the carrying capacity of the roadway.

Exhibit F-3 illustrates the LOS results for 2014 conditions (top) and the future year 2040 land use on the 2014 E+C roadway network (bottom). The roadway links are color-coded based on their LOS and corresponding congestion level as follows:

- LOS D links (Marginal Congestion) are yellow,
- LOS E links (Moderate Congestion) are orange and
- LOS F links (Severe Congestion) are red.

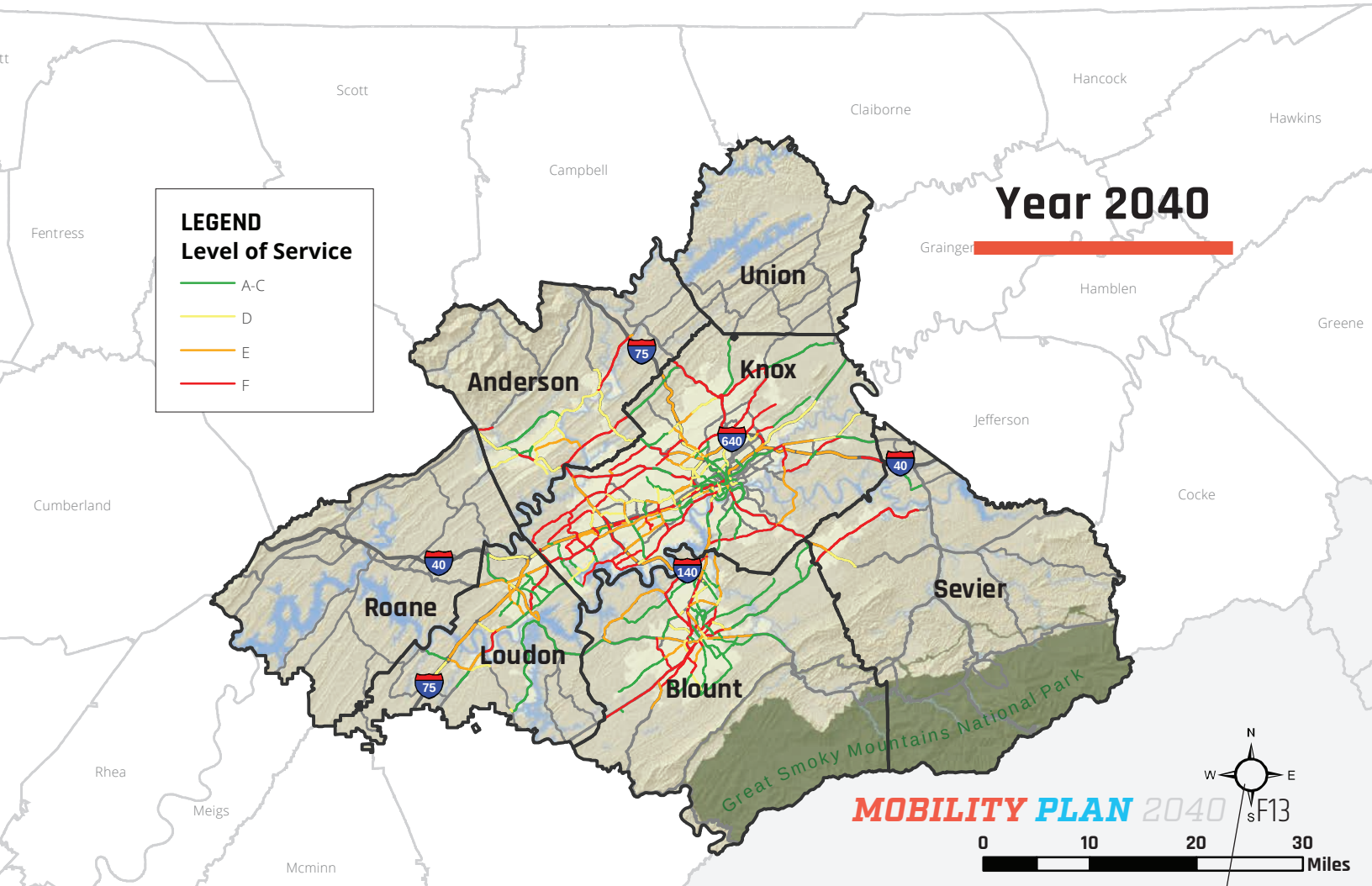
It is apparent that roadway congestion increases considerably if no improvements are made however it is important to note that the travel demand model is only one tool that helps identify deficient roadways. The results must be carefully scrutinized to determine whether a particular roadway is indeed an area of concern. One drawback of the model is that it can only measure effects of major improvement projects. These include additional lanes or new roadways. Smaller capacity improvements such as intersection improvements, additional turn lanes, and other congestion management strategies will not typically show much effect in the model.

The "Build" scenario simply incorporates the projects that have been selected for the financially constrained project list that is included in Appendix E. The roadway improvement projects that were selected generally address at least one of three major needs – safety, capacity, or system connectivity/ economic development. Many roadways in the Knoxville Region were originally constructed long ago and do not possess modern design features to accommodate motor vehicles, pedestrians and bicycles in a safe and efficient manner.

The Congestion Management Process was utilized to determine if roadway congestion could first be mitigated using operational strategies or reducing travel demand. In certain cases, however, additional system capacity through widening of existing roadways to add general-purpose lanes was deemed necessary to effectively meet either existing or forecasted travel demand. In other cases, additional system capacity through construction of roadways on new alignment was determined to be necessary to improve roadway network connectivity and/or provide access to areas of planned residential or commercial development, such as the Alcoa West Plant redevelopment area in the City of Alcoa.

The TPO Travel Demand Model was utilized to analyze various statistics to determine overall impacts of constructing the roadway projects recommended by this Plan. Table F-3 below shows the daily

**F-3:** Level of Service

vehicle miles of travel (VMT), daily vehicle hours of travel (VHT), system-wide average speed, and projected daily hours of delay for motor vehicles that result for three different roadway network scenarios. The three scenarios include base year conditions of 2010 with existing and committed projects in place, future year 2040 conditions with existing plus committed (E+C) projects, i.e. the "No-Build" scenario, and finally, future year 2040 with implementation of recommended roadway projects.

**Table F-4:** Network Analysis Based on Three Network Scenarios

| Network Analyzed | Daily VMT (miles/day) | Daily VHT (hours/day) | Average System Speed (mph) | Total Hours of Delay (hours/day) |
|---|---|---|---|---|
| 2014 E+C | 17,496,723 | 439,123 | 39.8 | 88,272 |
| 2022 E+C | 19,844,144 | 519,256 | 38.2 | 121,864 |
| 2022 Projects | 19,878,524 | 517,201 | 38.4 | 119,166 |
| 2030 E+C | 22,202,521 | 613,424 | 36.2 | 167,629 |
| 2030 Projects | 22,640,958 | 607,640 | 37.3 | 155,352 |
| 2040 E+C | 25,139,468 | 746,842 | 33.7 | 240,223 |
| 2040 Projects | 25,909,839 | 734,648 | 35.3 | 216,534 |
| **Source:** *Knoxville Regional Travel Demand Model (KRTM)* | | | | |

While it is obvious that the projects identified by this Plan significantly improve future operations versus the No-Build scenario, there are still projected to be several remaining roadway sections with excessive congestion. It is widely recognized that it is impossible to build your way out of congestion. Instead, the full list of operational and travel demand management strategies should be considered for the remaining deficient roadways given the fact that major capacity improvements are very costly and can be very disruptive to residences, businesses, and the environment.

# APPENDIX G
# KNOXVILLE REGIONAL TRAVEL MODEL 2014 BASE YEAR UPDATE AND SOCIOECONOMIC PROJECTION CONTROL TOTAL DEVELOPMENT DOCUMENTATION

This appendix consists of three sections describing the technical process used by the TPO to develop the regional travel demand forecasting model and its primary socioeconomic attributes.

**Section 1** is a brief overview of general information about travel demand models.

**Section 2** describes the development of the updated version of the regional travel demand model and demonstrates that it meets certain validation standards in terms of replicating base year 2014 actual traffic volumes.

**Section 3** provides documentation of the selection of the source of future year county-level projections of population in the model region, which was formally endorsed by the TPO Executive Board for use in the Mobility Plan update.

# Section 1
# Background on Travel Demand Modeling

## Background

To project future conditions of the roadway system the TPO uses a computer-modeling tool known as a travel demand forecasting model. The Knoxville Regional Travel Demand Model (KRTM) is calibrated to closely replicate existing traffic patterns in the Knoxville Region to provide a means of forecasting future traffic volumes and conditions. The model c overs the primary roadway network in a 10-county area that includes Anderson, Blount, Grainger, Hamblen, Jefferson, Knox, Loudon, Roane, Sevier, and Union counties. To develop the model, mathematical relationships between travel activity and household socioeconomic characteristics were derived from extensive travel behavior surveys that were conducted in the years 2000 and 2008. In these surveys, approximately 3,000 households in the Knoxville Region were asked to record their travels in a one-day period including:

- Purpose of the trip
- Origin and destination of each trip
- Mode of transportation used
- Time of day the trip was made

The model was then developed based on the assumption that households with similar socio-economic characteristics such as household income, number of school-age children, and vehicle ownership would demonstrate similar travel activity. These household characteristics are available from the U.S. Census Bureau and are input into the model based on their distribution across small geographic areas in the Knoxville Region known as Traffic Analysis Zones (TAZ).

In addition to the socioeconomic inputs at the TAZ-level, the model also includes a mathematical representation of the roadway network as a system of links and nodes. Each link in the model represents a segment of roadway that is described by several attributes, including:

- Functional classification,
- Speed limit
- Number of lanes
- Pavement width
- Level of access control
- Whether it is divided by a median

.The Nodes represent intersections, locations of traffic signals, and places where roadway characteristics might change in the middle of a segment (such as where a road narrows). Roadway attributes are used to determine the vehicular capacity and travel time along each link in the model network. The model can therefore be used to test alternative improvement strategies by changing appropriate attributes such as increasing the number of lanes or by coding in a new link to represent construction of a new roadway.

## Travel Demand Model Process Overview

Travel demand modeling has been in national practice for over 50 years since the development of original "4-step" models in the 1950s and 1960s. Recently there has been a shift from the standard 4-step process towards a more detailed approach known as "Activity-based Modeling," which has been implemented in some of the larger cities in the nation. For more information about travel demand modeling, see the FHWA Travel Model Improvement Program, at www.fhwa.dot.gov/planning/tmip.

The Knoxville Regional TPO recently updated the overall structure of the model from the standard 4-step process to introduce some elements from activity-based travel demand modeling.

# Section 2
# Knoxville Regional Travel Demand Model Update Overview and Validation Report

## I. Background

This travel demand model update is being used to support the development of the next regular 4-year cycle updates of the long range transportation plans for the Knoxville Regional TPO and LAMTPO, which are required to be approved by May 31, 2017. The decision to proceed with a minor update of the travel models at this time was based on a number of factors, the primary of which being that no additional travel behavior surveys have been conducted since the previous major model update. Secondary reasons include factors such as a generally stable land use, population and employment trend in the Knoxville Region as well as a desire to await full availability of TDOT's phase three statewide model update and potential leverage of its data resources such as the AirSage O/D data prior to conducting the next full blown update of the KRTM. The TPO staff met with TDOT staff in July 2015 to discuss the intent to proceed with a minor update based on these and other factors and general agreement was received. The current model was approved by TDOT in December 2012.

The current KRTM is based on a "Hybrid" Activity/Trip Based model platform that was first developed by the consulting firm Bernardin, Lochmueller & Associates (BLA) and delivered to the TPO in September 2009. This model was calibrated to a 2006 base year and based primarily on a household travel survey that was conducted in Knox & Blount counties however the model geography was expanded to nine

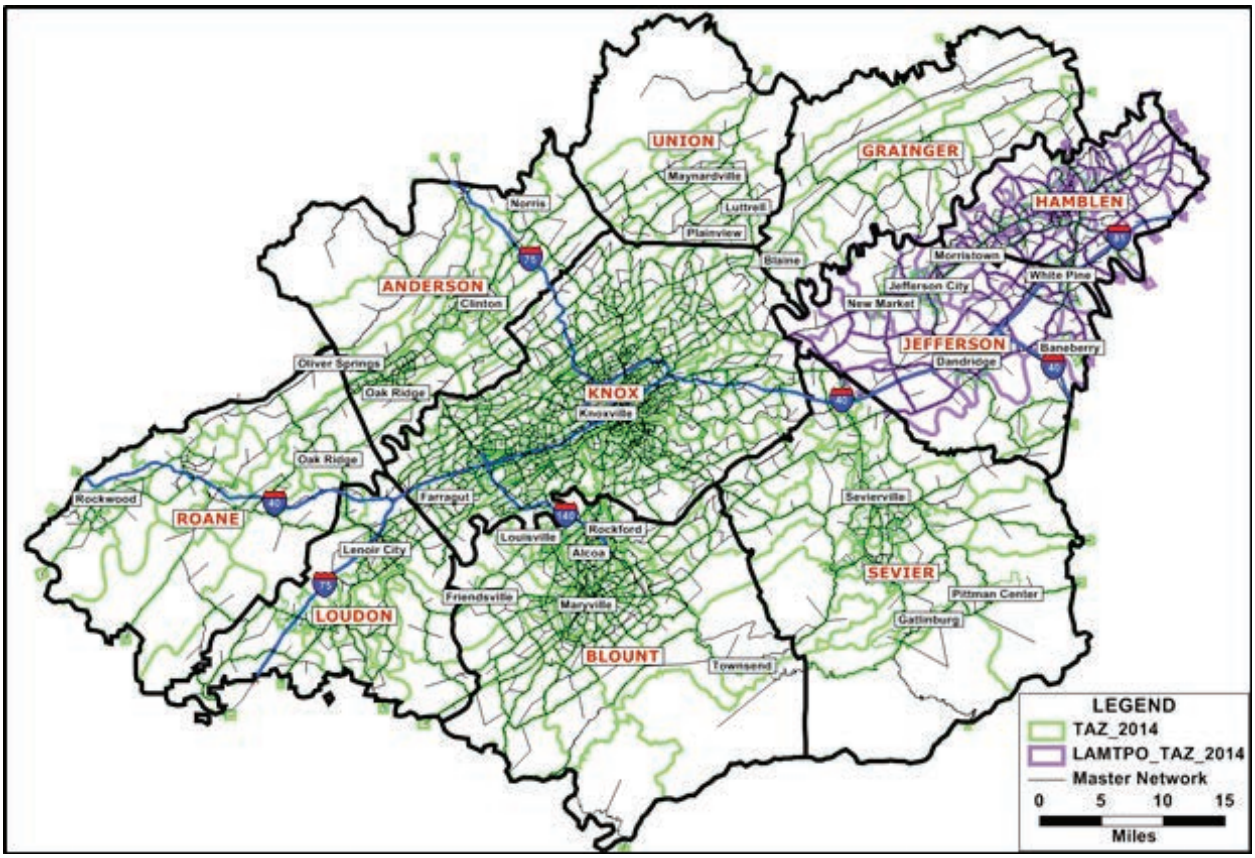
counties due to the need to analyze transportation conformity for a 6-county ozone nonattainment area. The KRTM was subsequently updated and delivered by BLA to the TPO in June 2012. This update kept the basic platform of the travel behavior models however the relationships were modified based on a new household travel survey that covered the 9-county region in combination with the 2000 household travel survey. The 2012 update also expanded the geography to include Hamblen County as well as to develop a standalone subarea model of the LAMTPO region which was now fully encompassed within the larger KRTM. This model used the year 2010 as its new base year in order to coincide with the newly available 2010 Decennial Census information. Documentation of the 2009 and 2012 KRTM updates as well as the 2012 standalone LAMTPO subarea model are available upon request from the TPO staff as well as being documented in the 2013 version of the Knoxville Regional Mobility Plan.

# II. Network and Traffic Analysis Zones (TAZ) Updates

The TAZ boundaries were not modified for this update of the KRTM, however the underlying socioeconomic data was updated from year 2010 to 2014 as will be discussed in more detail in a subsequent section. There are 1,153 internal zones and 33 external zones in the KRTM.

The roadway network was only slightly modified in this update. The KRTM utilizes a “Master Network” platform with one geographic file to represent all different roadway build scenarios through a network identifier field. The roadway network attributes were updated to reflect the characteristics in place for year 2014 for roadways that had been modified since 2010 through improvement projects or other changes. Additionally, a significant update of roadway functional classification was undertaken by the TPO and reflected in the model roadway network. A review was conducted to determine the actual functional classification system utilized for TDOT’s preparation of the 2014 Highway Performance Monitoring System (HPMS) vehicle miles travelled information and a new network field was also created to correspond with that designation. This was important because there were some functional classification changes that were made solely based on the new urban/rural designations from the 2010 Census reflected in the 2014 HPMS data, but were not reflective of the TPO functional classification changes adopted by its Executive Board in April 2015. A couple of other roadway network changes made involved the modification of a few centroid connector locations/connections and addition of a few new roadways where necessary to improve network loadings.

**Figure G-1:** Overview KRTM and LAMTPO Model TAZ and Roadway Network Coverage




# III. Socioeconomic Data Updates

A concerted effort was made to update the TAZ demographic and socioeconomic attributes from year 2010 to 2014, which are applicable to both the KRTM and the LAMTPO model. The following sections provide documentation of the four major categories of TAZ attributes that were updated.

## A. Population and Housing

Unfortunately since 2014 is an intercensal year it is much more difficult to obtain TAZ-level data for population and housing information than for a decennial census year such as 2010 where these counts are available down to the census block level geography. Fortunately, however, since the year 2014 was an air quality analysis year for the previous long range transportation plan update the TPO had already developed a 2014 TAZ layer. The forecast for population growth for the 2014 TAZ layer was based primarily on locations of "approved development" in the Region obtained from planning departments at local jurisdictions and normalized to the previous projected county-level control totals. For this update the county level control totals for population were set to match the U.S. Census Bureau's "Current Estimates Data" which provided county-level population as of July 1, 2014. The previous TAZ-level population allocations were adjusted proportionally to match the new control totals except for Knox County. In Knox County additional data was available on specific locations of

new residential building permits that were issued between 2010 and 2014 and these were used to proportionally allocate population growth.

Table G-2 below shows the county level population control totals for the previous TAZ layer compared with the updated numbers. The previous model had forecasted roughly 1% higher growth in population than was actually observed.

**Table G-2:** Population Control Totals for 2014 Base Year

| County | 2010 Census | 2014 Census Pop Estimate | 2014 TDM Population | Difference (2014 - 2010) | Difference (2014 - 2014 TDM) | Amount to Allocate |
|---|---|---|---|---|---|---|
| Anderson | 75,129 | 75,528 | 75,733 | 604 | -205 | 399 |
| Blount | 123,010 | 126,339 | 130,827 | 7,817 | -4488 | 3,329 |
| Grainger | 22,657 | 22,864 | 23,256 | 599 | -392 | 207 |
| Hamblen | 62,544 | 63,036 | 62,872 | 328 | 164 | 492 |
| Jefferson | 51,407 | 52,677 | 53,436 | 2,029 | -759 | 1,270 |
| Knox | 432,226 | 448,644 | 447,316 | 15,090 | 1328 | 16,418 |
| Loudon | 48,556 | 50,771 | 51,264 | 2,708 | -493 | 2,215 |
| Roane | 54,181 | 52,748 | 54,878 | 697 | -2130 | -1,433 |
| Sevier | 89,889 | 95,110 | 97,800 | 7,911 | -2690 | 5,221 |
| Union | 19,109 | 19,113 | 19,813 | 704 | -700 | 4 |
| **TOTAL** | **978,708** | **1,006,830** | **1,017,195** | **38,487** | **-10,365** | **28,122** |

## B. Employment

The KRTM categorizes employment into four major types of: Basic (farming, construction), Industrial, Service and Retail. There are limited data sources for employment at the small geographic scale needed for the model. Fortunately a year 2013 data set from the private company known as infoUSA was purchased by TDOT and made available to the MPOs across the state. This data set provides establishment level data of employment by industry type, i.e. NAICS code and is provided with geographic coordinates so that it can be aggregated to the TAZ level. The TPO staff spent a great deal of time in reviewing the data set for accuracy in terms of employer size, location and industry type. A number of modifications were made based on comparison of the data against other sources such as company websites, chambers of commerce employer lists and a data set obtained from the Tennessee Department of Labor & Workforce Development known as the "Quarterly Census of Employment and Wages" (QCEW) which was similar in format to the infoUSA data in terms of it providing establishment-level counts of employees and industry types. The TPO staff also reviewed its previous methodology for setting county-level control totals for employment. Previously, the TPO utilized data from the Bureau of Economic Analysis (BEA) to set the county level control totals, however there were some questions raised regarding the relatively high numbers reported by BEA versus other sources such as the Bureau of Labor Statistics (BLS). A review of documentation for various data sources points to most of the discrepancy relating to the treatment of certain categories of employment and in particular "sole proprietorships" which are businesses run by one person.

Ultimately, the TPO decided to utilize the BLS data and supplemented it with data from the "Non-employer" component of the Census County Business Patterns data set and farm employment from the BEA data since those two employment types were not covered by BLS. The final control totals were in very good alignment with the aggregated infoUSA data and required relatively small adjustment factors to be applied as shown in the following table (Table G-3).

**Table G-3:** Employment Control Totals and InfoUSA Correction Factors by County

| | CONTROL TOTALS | | | | |
|---|---|---|---|---|---|
| County | Basic | Industrial | Retail | Service | Total |
| Anderson | 3,525 | 11,822 | 6,806 | 21,412 | 43,565 |
| Blount | 5,566 | 10,840 | 11,549 | 26,056 | 54,011 |
| Grainger | 1,630 | 1,310 | 662 | 2,275 | 5,877 |
| Hamblen | 2,301 | 11,122 | 7,029 | 13,064 | 33,516 |
| Jefferson | 2,651 | 3,693 | 3,458 | 6,582 | 16,384 |
| Knox | 15,906 | 34,470 | 56,334 | 150,338 | 257,048 |
| Loudon | 3,383 | 3,842 | 3,683 | 7,273 | 18,181 |
| Roane | 1,983 | 2,198 | 3,557 | 13,436 | 21,174 |
| Sevier | 3,183 | 2,815 | 23,111 | 22,273 | 51,382 |
| Union | 917 | 651 | 626 | 1,591 | 3,785 |
| **TOTAL** | **41,045** | **82,763** | **116,815** | **264,300** | **504,923** |

| | InfoUSA TOTALS | | | | |
|---|---|---|---|---|---|
| County | Basic | Industrial | Retail | Service | Total |
| Anderson | 2,075 | 11,487 | 8,146 | 22,868 | 44,576 |
| Blount | 3,380 | 11,687 | 12,667 | 26,759 | 54,493 |
| Grainger | 318 | 848 | 681 | 1,693 | 3,540 |
| Hamblen | 1,502 | 9,553 | 6,434 | 13,104 | 30,593 |
| Jefferson | 1,070 | 3,874 | 2,968 | 6,168 | 14,080 |
| Knox | 15,016 | 30,301 | 64,158 | 151,491 | 260,966 |
| Loudon | 1,759 | 4,032 | 4,048 | 7,312 | 17,151 |
| Roane | 798 | 2,526 | 4,309 | 13,839 | 21,472 |
| Sevier | 2,418 | 2,968 | 26,367 | 22,312 | 54,065 |
| Union | 218 | 798 | 523 | 1,584 | 3,123 |
| **TOTAL** | **28,554** | **78,074** | **130,301** | **267,130** | **504,059** |

| | Correction Factors | | | |
|---|---|---|---|---|
| County | Basic | Industrial | Retail | Service |
| Anderson | 1.699 | 1.029 | 0.836 | 0.936 |
| Blount | 1.647 | 0.928 | 0.912 | 0.974 |
| Grainger | 5.126 | 1.545 | 0.972 | 1.344 |
| Hamblen | 1.532 | 1.164 | 1.092 | 0.997 |
| Jefferson | 2.478 | 0.953 | 1.165 | 1.067 |
| Knox | 1.059 | 1.138 | 0.878 | 0.992 |
| Loudon | 1.923 | 0.953 | 0.910 | 0.995 |
| Roane | 2.485 | 0.870 | 0.825 | 0.971 |
| Sevier | 1.316 | 0.948 | 0.877 | 0.998 |
| Union | 4.206 | 0.816 | 1.197 | 1.004 |

### C. Socioeconomic and Demographic Variables

The KRTM utilizes zonal average socioeconomic and other demographic variables to inform some travel behavior characteristics that differentiate one household type from another. The key variables used in the KRTM found to have statistically significant effects on trip making either directly or indirectly are: Median Household Income, Percent Households with Seniors (age > 65), Workers per Household, Students per Household and Vehicles per Household. These variables were all updated utilizing the most recent available census information, primarily being the most current 5-year American Community Survey (ACS) data from 2010-2014, which is available at the Block Group level.

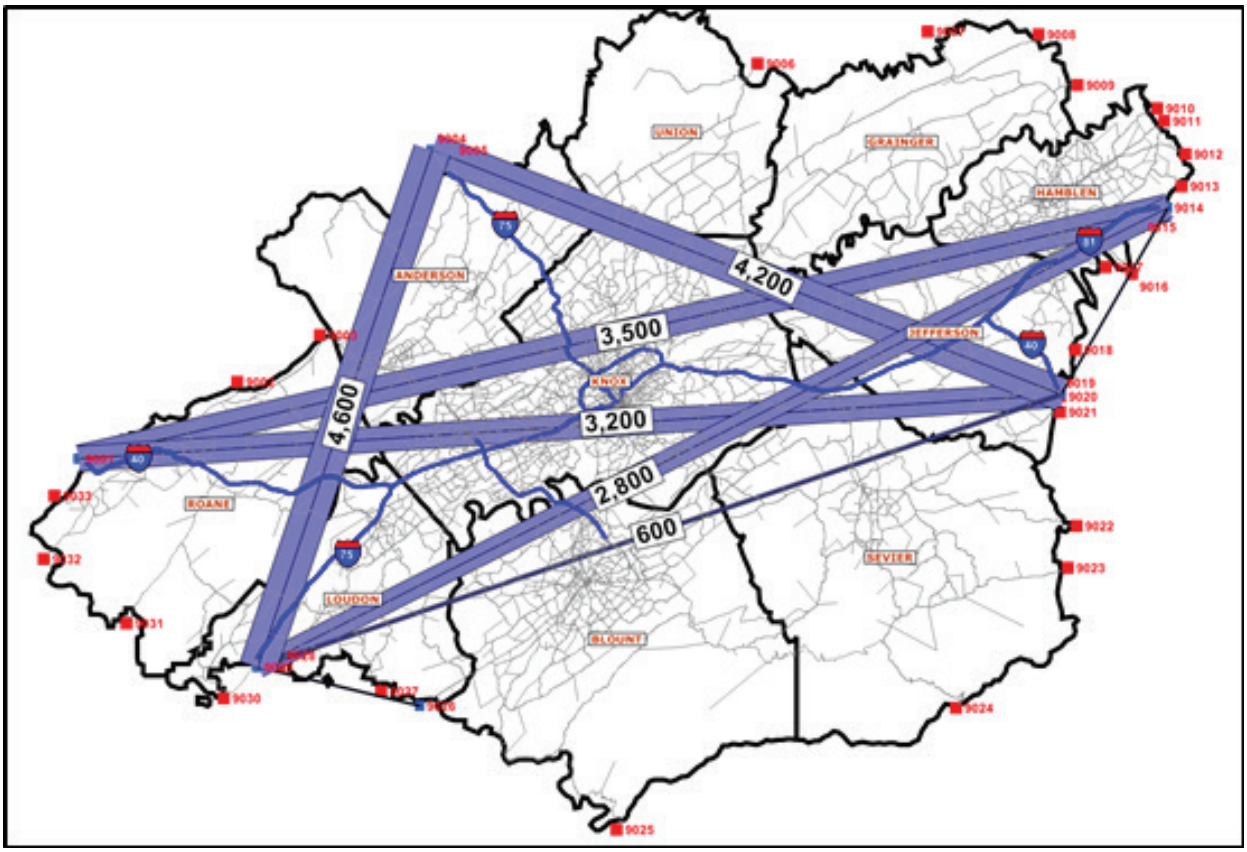
### D. School Enrollment

Updated school enrollment data was obtained from the Tennessee Department of Education website for year 2014 for each K-12 school located in the 10-county KRTM study area.

## IV. External Trips Update

The external-external truck trips were updated based on newly available truck origin-destination information from the American Trucking Research Institute (ATRI) that was obtained by TDOT and provided to the MPOs in Tennessee. A subarea assignment procedure was performed within TransCAD using the Phase 2 Tennessee Statewide Model network in order to obtain new external-external truck trip matrices for both the KRTM and updated LAMTPO model external stations, which reflect its expanded geography. Since the ATRI data was reflective of 2010 demand, the values were updated based on the 2014 traffic volumes at each external station and the final matrices were balanced to reflect the fact that over a 24-hour period one would expect the same amount of flow to/from and from/to each external station. The ATRI data seemed to provide a large improvement over the previous external-external data in terms of better traffic volume validation statistics on the major interstate movements. Figure G-4 shows the major external-external movements for the KRTM and LAMTPO model respectively.

**Figure G-4:** KRTM Major E-E Trip Interchanges




# V. Trip Generation Calibration/Validation

As noted previously, none of the underlying travel behavior relationships were modified as part of this model update, however it is still necessary to check to ensure the reasonableness of the overall trip generation characteristics of the model which are affected by the updated zonal estimates of population, employment and socioeconomic attributes. An important point to make is that the KRTM, being built on a hybrid trip/tour based platform, generates tours and stops rather than trips which results in some differences in definitions of trip types that affect the ability to directly compare against some of the TN Model Guidelines. More information regarding some of these differences is available in the original 2009 and 2012 KRTM travel model documentation.

The following sections relate the new 2014 base year model outputs against suggested checks from the TN Model Guidelines.

## A. Aggregate Trip Rates

The following table (G-5) depicts side-by-side comparisons of both the KRTM and LAMTPO models' aggregate trip generation statistics as well as the typical benchmarks cited in the TN Model Guidelines document. The models are demonstrated to perform within the ranges shown in the benchmarks with a minor exception being the HBW Person Trips/Employee value in the KRTM being slightly higher than the benchmark. This is likely due to the definitional differences of tours/stops in the KRTM versus the traditional trip based models used as benchmarks. The KRTM work tours include trip chaining effects of other stops made on work trips that are not reflected in the traditional definition of HBW trips and therefore one would expect this value to be higher in the KRTM.

**Table G-5:** Model Trip Generation Rate Comparisons

**Aggregate Trip Rates - KRTM**

| Tour/Stop Type | # of Tours/Stops |
|---|---|
| Work Tours | 403,847 |
| Work Stops (low inc) | 81,114 |
| Work Stops (other) | 407,627 |
| College Stops | 9,307 |
| Other Stops | 373,336 |
| School Tours | 191,180 |
| School Stops | 195,615 |
| Other Stops | 88,739 |
| Other Tours | 607,448 |
| Short Maintenance Stops | 493,978 |
| Long Maintenance Stops | 307,881 |
| Discretionary Stops | 376,304 |
| **Total** | **3,536,376** |

| | |
|---|---|
| Total Study Area TAZs | 1,153 |
| Check - Person Trips/TAZ | 3,067 |
| Study Area Population | 1,006,827 |
| Check - Person Trips/Person | 3.5 |
| Study Area Households | 407,990 |
| Check - Person Trips/HH | 8.7 |
| Study Area Employees | 502,771 |
| Check - HBW Person Trips/Employee | 1.62 |

**Aggregate Trip Rates - LAMTPO Model**

| Tour/Stop Type | # of Tours/Stops |
|---|---|
| Work Tours | 41,304 |
| Work Stops (low inc) | 8,877 |
| Work Stops (other) | 41,021 |
| College Stops | 996 |
| Other Stops | 35,337 |
| School Tours | 22,009 |
| School Stops | 22,520 |
| Other Stops | 10,117 |
| Other Tours | 65,784 |
| Short Maintenance Stops | 53,453 |
| Long Maintenance Stops | 32,895 |
| Discretionary Stops | 40,136 |
| **Total** | **374,449** |

| | |
|---|---|
| Total Study Area TAZs | 187 |
| Check - Person Trips/TAZ | 2,002 |
| Study Area Population | 110987 |
| Check - Person Trips/Person | 3.4 |
| Study Area Households | 43,096 |
| Check - Person Trips/HH | 8.7 |
| Study Area Employees | 48,190.00 |
| Check - HBW Person Trips/Employee | 1.35 |

| Benchmarks | |
|---|---|
| **Low** | **High** |
| N/A | 15,000 |
| | |
| 3.3 | 4.0 |
| | |
| 8.0 | 10.0 |
| | |
| 1.20 | 1.55 |

## B. Percent Trips by Purpose

The following table (G-6) depicts the percent trips (or in the case of the KRTM, tours) against benchmark values reported in the TN Model Guidelines where applicable. As noted in the previous section, the definitional differences of tours versus trips do not allow for a strictly apples to apples comparison against traditional trip based models however the values in all cases do appear to be reasonable.

**Table G-6:** Percent Trips by Purpose

| Percent Trips by Purpose - KRTM | | Percent Trips by Purpose - LAMTPO Model | | Benchmarks | |
|---|---|---|---|---|---|
| | | | | Low | High |
| Home Based Work | 23% | Home Based Work | 22% | 12% | 24% |
| Home Based School | 9% | Home Based School | 12% | 5% | 8% |
| Home Based Other | 35% | Home Based Other | 34% | N/A | N/A |
| Home Based UT | 1% | Home Based UT | N/A | N/A | N/A |
| Home Based Visitor | 2% | Home Based Visitor | N/A | N/A | N/A |
| Non-Home Based | 30% | Non-Home Based | 31% | 20% | 33% |
| Home Based Non-Work | 47% | Home Based Non-Work | 46% | 45% | 60% |

# VI. Trip Distribution Calibration/Validation

## A. Trip Length Distribution Check

The figures below depict the trip length frequency distributions (TLFD) for the major trip categories of home-based work (HBW), home-based other (HBO) and non-home based (NHB) for both the KRTM and LAMTPO models. The original travel survey data with which to make comparisons against was unavailable and also the differing geographic scales of the combined 2001 and 2008 Knoxville travel surveys would likely make direct comparisons a challenge. The TLFD is notably different between the KRTM and LAMTPO models given their contrasting geographic scales of 10-counties for the KRTM and only 2-counties for the LAMTPO model.

**Figure G-7:** Home Based Work Trip Length Frequency Distribution

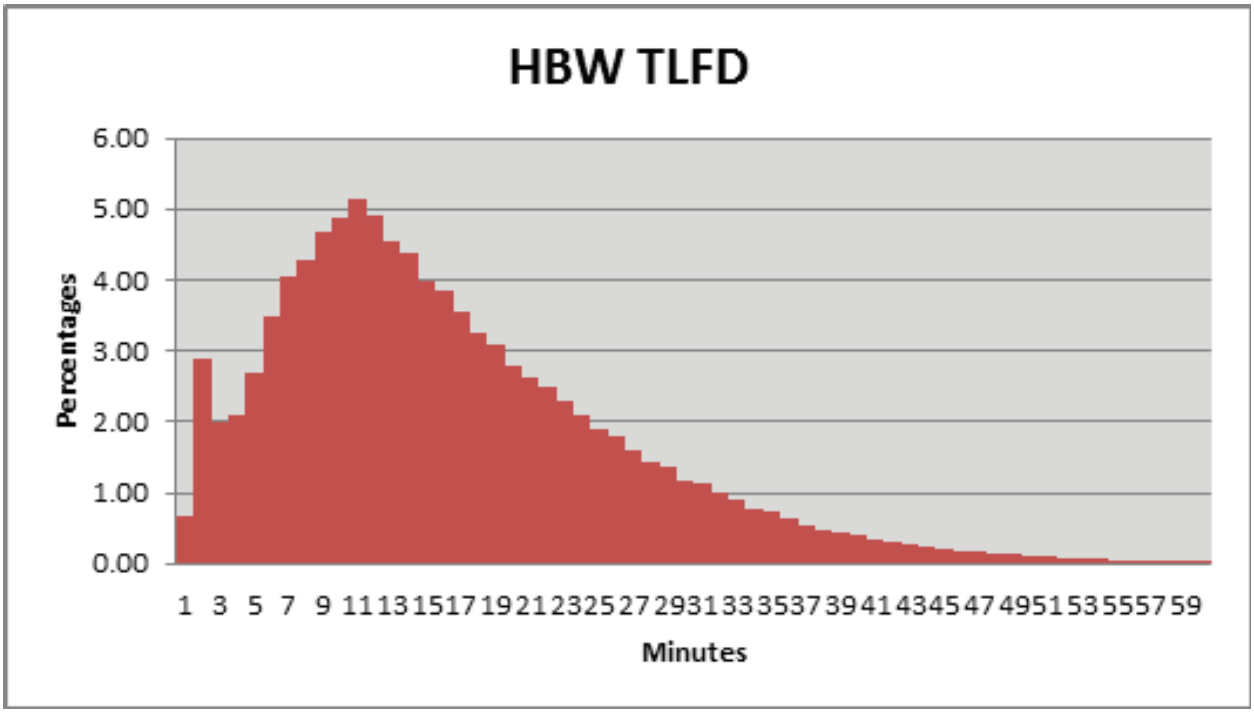


**Figure G-8:** Home Based Other Trip Length Frequency Distribution

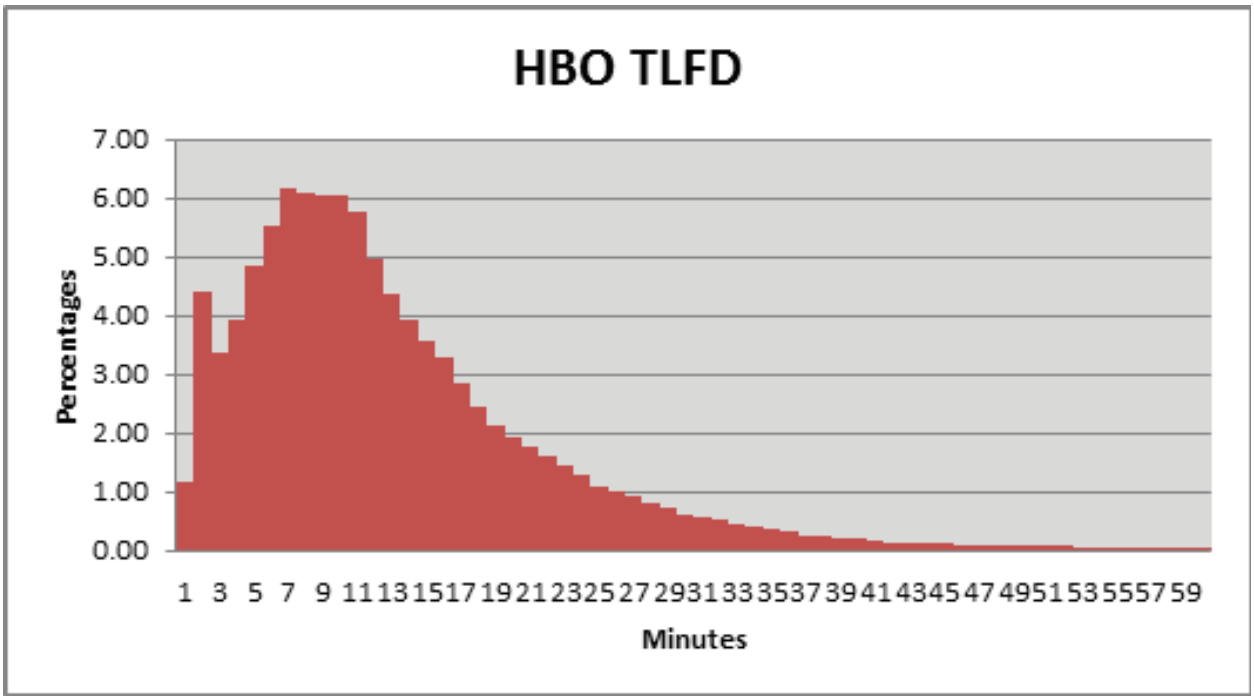
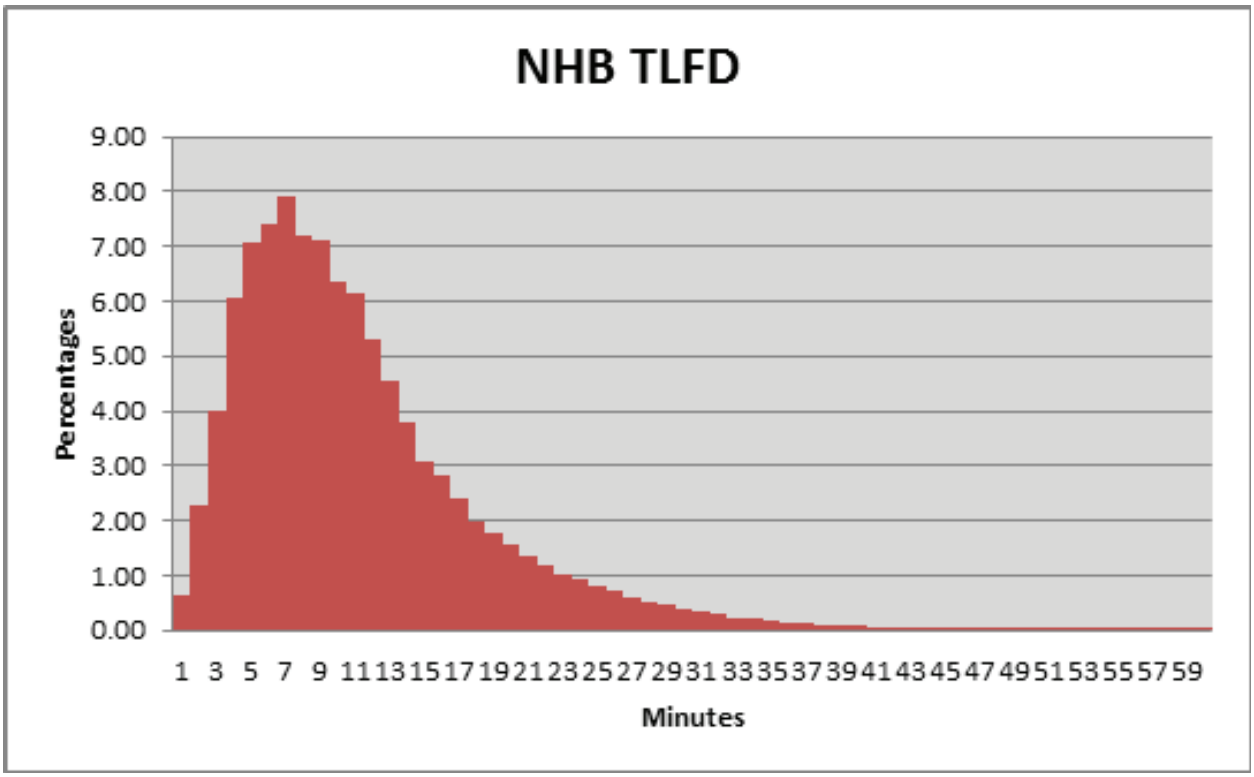



**Figure G-9:** Non-Home Based Trip Length Frequency Distribution



## B. Intrazonal Percentage

The following table (G-10) shows the percentage of intrazonal trips against the observed survey information and the TN Model Guidelines benchmarks. Since the KRTM contains a large 10-county region with several largely undeveloped rural areas it would be expected to tend toward the higher end of the ranges for intrazonal trips given some of the extremely large zone sizes in that rural area.

**Table G-10:** Intrazonal Trip Percentage by Trip Type

| | Percent Intrazonal Trips | | | Benchmarks | |
|---|---|---|---|---|---|
| Tour/Stop Type | OBSERVED | KRTM | LAMTPO | Low | High |
| Work Tours | | | | | |
| Work Stops (low inc) | 3.3% | 3.4% | 3.4% | 1.0% | 4.0% |
| Work Stops (other) | 3.0% | 3.0% | 3.5% | 1.0% | 4.0% |
| College Stops | 0.0% | 0.6% | 0.2% | N/A | N/A |
| Other Stops | 4.2% | 4.2% | 3.4% | N/A | N/A |
| School Tours | | | | | |
| School Stops | 11.3% | 11.7% | 6.1% | 10.0% | 12.0% |
| Other Stops | 8.8% | 9.1% | 5.1% | N/A | N/A |
| Other Tours | | | | | |
| Short Maintenance Stops | 7.6% | 6.3% | 2.5% | 3.0% | 7.0% |
| Long Maintenance Stops | 3.4% | 3.9% | 2.2% | 3.0% | 7.0% |
| Discretionary Stops | 6.6% | 7.1% | 3.5% | 3.0% | 7.0% |
| Total Trips | N/A | 5.7% | 4.7% | 3.0% | 5.0% |

## C. Average Trip Length

The following table (G-11) depicts the average trip length and frequencies by purpose in each of the KRTM and LAMTPO models against the observed survey information and the TN Model Guidelines benchmarks.

**Table G-11:** Trip Length by Trip Type

| | Mean Travel Time from Home (min.) | | | Benchmarks | |
|---|---|---|---|---|---|
| Tour/Stop Type | OBSERVED | KRTM | LAMTPO | Low | High |
| Work Tours | | | | | |
| Work Stops (low inc) | 15.3 | 14.9 | 9.7 | 12 | 35 |
| Work Stops (other) | 18.5 | 18.4 | 11.5 | 12 | 35 |
| College Stops | 20.8 | 21.7 | 11.8 | 12 | 35 |
| Other Stops | 14.6 | 14.4 | 10.3 | 12 | 35 |
| School Tours | | | | | |
| School Stops | 10.1 | 9.9 | 11.9 | 7 | 16 |
| Other Stops | 12.4 | 12.8 | 11.3 | 7 | 16 |
| Other Tours | | | | | |
| Short Maintenance Stops | 11.7 | 10.7 | 9.5 | 8 | 20 |
| Long Maintenance Stops | 15.0 | 15.2 | 10.7 | 8 | 20 |
| Discretionary Stops | 14.2 | 15.7 | 11.9 | 8 | 20 |
| External-Internal Trips Avg TT | N/A | 37.0 | 18.0 | 26 | 58 |

# VII. Mode Choice

The mode choice models were unchanged for this update, however there were some changes to the transit routes between the previous base year 2010 and the base year of this update, which is 2014. The KRTM includes the fixed bus route system of Knoxville Area Transit (KAT), which is comprised of 24 regular routes with a single trip fare of $1.50 and 3 special rubber-tire trolley routes that are fare-free. The most notable changes since 2010 involved the elimination of two suburban express routes from west Knox County to downtown and the University of Tennessee and the increase in frequency of transit service to 15-minutes from 30-minutes on three major routes (Kingston Pike, Broadway and Magnolia Avenue). These changes were incorporated in the physical route system modeled in TransCAD in terms of the elimination of the express routes and the attributes which reflect the peak hour headways. There were other minor changes to some routes that were also incorporated.

The KRTM produces a "system-level" ridership estimate that predicts ridership aggregated at the zonal level and not by route-specific ridership. A calibration check was made using actual average weekday ridership counts provided by KAT for October 2014. As the following table (G-12) shows, the KRTM was within 1% of matching the observed ridership.

**G-12:** Observed vs. Modeled Weekday Transit Ridership

| | October 2014 Observed | KRTM |
|---|---|---|
| Transit Person Trips | | 8,082 |
| Estimated Weekday Transit Boardings | 10,407 | 10,506 |

# VIII. Truck Model Performance

The KRTM's truck modeling procedures are largely based on methodology described in the Quick Response Freight Manual along with some modifications based on locations of special truck generators and some special network assignment algorithms that were developed to ensure trucks would utilize the most likely roadways primarily based on functional class. Further documentation is available in the 2009 and 2012 KRTM model technical report.

It is somewhat difficult to specifically test the performance of the truck model given the current limited data availability for classification counts. The multi-unit (MU) and single-unit (SU) truck percentages of the total traffic volume are reported in the TDOT TRIMS data however it is not always certain as to what vintage the truck percentages represent or if they are even perhaps reported more as an "assumed" value in some cases. Where available, the truck percentages from TRIMS were coded to the model network and applied to the daily traffic volume to generate an estimated total truck (MU and SU) volume. The following table (G-13) compares the total modeled truck volumes to the estimated counts provided in TRIMS by functional classification. There appears to be good general agreement between the modeled volumes and actual counts, especially for the key roadway classifications of Urban and Rural Interstate where the vast majority of truck volume exists.

**Table G-13:** Observed vs. Modeled Truck Volumes by Functional Class

| Functional Classification | Num of Observations | Avg Truck Count | Avg Truck Modeled | Avg Error | Pct Error | Pct RMSE |
|---|---|---|---|---|---|---|
| *R. Interstate* | *59.0* | *6840.6* | *7466.3* | *625.7* | *9.1* | *28.9* |
| R. Prin. Arterial | 30.0 | 902.5 | 1113.9 | 211.4 | 23.4 | 53.8 |
| R. Minor Arterial | 68.0 | 342.3 | 363.8 | 21.5 | 6.3 | 92.1 |
| R. Major Collector | 130.0 | 84.3 | 162.3 | 78.0 | 92.6 | 224.4 |
| R. Minor Collector | 100.0 | 34.2 | 43.6 | 9.4 | 27.5 | 198.3 |
| R. Local Road | 4.0 | 34.3 | 37.2 | 2.9 | 8.6 | 47.9 |
| *U. Interstate* | *124.0* | *6406.7* | *5884.5* | *-522.2* | *-8.2* | *22.7* |
| U. Other Freeway | 2.0 | 722.0 | 753.6 | 31.6 | 4.4 | 5.9 |
| U. Prin. Arterial | 217.0 | 1480.0 | 927.8 | -552.2 | -37.3 | 92.4 |
| U. Minor Arterial | 223.0 | 562.6 | 300.9 | -261.7 | -46.5 | 129.3 |
| U. Collector | 290.0 | 144.5 | 106.2 | -38.3 | -26.5 | 176.4 |
| U. Local Road | 17.0 | 154.9 | 82.3 | -72.7 | -46.9 | 90.2 |
| **ALL** | **1266.0** | **1387.7** | **1230.5** | **-157.3** | **-11.3** | **65.8** |

# IX. Traffic Assignment Validation – TDOT/TNMUG Adopted Tests

The updated base year 2014 model outputs were compared against year 2014 traffic count data provided by TDOT and also where collected by the Knoxville TPO in order to determine how well the model is replicating actual traffic volumes. Validation criteria adopted by the Tennessee Model User Group and documented in the "Minimum Travel Demand Model Calibration and Validation Guidelines for State of Tennessee" were used to demonstrate the effectiveness of the model. Overall the model performed exceptionally well in terms of meeting the validation criteria and overall % Root Mean Square Error (%RMSE) statistics were very good at 26.1%.

The following tables show the most current validation criteria and model performance. A separate table is also provided showing the vehicle miles traveled comparison between model outputs and the 2014 HPMS for the overall KRTM. The tables demonstrate the model meets the necessary criteria with the exception of one screenline for the KRTM. Figures G-14 and G-15 show the actual count versus model volume linear regression results. Finally, figures G-16 and G-17 show the screenlines.

**Table G-14:** KRTM Model Validation Statistics

| #1 - Percent Difference in value for screenlines | Standard | Model Value | Pass/Fail | Average Count | Average Modeled | Num Obs |
|---|---|---|---|---|---|---|
| External model cordon line | +/- 1% | 0.12% | Pass | 8,609 | 8,619 | 33 |
| Screenlines with greater than 70,000 AADT | +/- 10% | | | | | |
| Rivers | +/- 10% | 2.10% | Pass | 17,824 | 18,198 | 22 |
| Inner Knoxville | +/- 10% | 2.45 | Pass | 26,463 | 27,111 | 16 |
| East Counties | +/- 10% | -0.01% | Pass | 11,669 | 11,667 | 11 |
| West Counties | +/- 10% | 19.19% | Fail | 16,122 | 19,216 | 8 |
| Northeast Counties | +/- 10% | 9.26% | Pass | 14,184 | 15,498 | 18 |
| Screenlines with less than 35,000 AADT | +/- 20% | | | | | |
| North Counties | +/- 20% | 15.96% | Pass | 4,349 | 5,043 | 7 |

| #2 - Percent Difference in volume by classification | Standard | Model Value | Pass/Fail | Average Count | verage Modele | Num Obs |
|---|---|---|---|---|---|---|
| Freeway Volume-to-Count | +/- 7% | 3.26% | Pass | 16,972 | 17,525 | 507 |
| Arterial Volume-to-Count | +/- 15% | -2.14% | Pass | 13,464 | 13,175 | 569 |
| Collector Volume-to-Count | +/- 25% | -4.48% | Pass | 3,242 | 3,097 | 1049 |

| #3 - Percent Difference in value for link volumes | Standard | Model Value | Pass/Fail | Average Count | verage Modele | Num Obs |
|---|---|---|---|---|---|---|
| AADT < 1,000 | +/- 200% | 40.10% | Pass | 624 | 875 | 187 |
| AADT = 1,000 - 2,500 | +/- 100% | 11.35% | Pass | 1,696 | 1,889 | 317 |
| AADT = 2,500 - 5,000 | +/- 50% | -1.24% | Pass | 3,698 | 3,653 | 319 |
| AADT = 5,000 - 10,000 | +/- 25% | -0.04% | Pass | 7,161 | 7,158 | 346 |
| AADT = 10,000 - 25,000 | +/- 20% | 0.60% | Pass | 16,556 | 16,656 | 412 |
| AADT = 25,000 - 50,000 | +/- 15% | 1.87% | Pass | 33,428 | 34,054 | 163 |
| AADT > 50,000 | +/- 10% | -7.04% | Pass | 73,289 | 68,131 | 25 |

| #4 - Coefficient of Determination | Standard | Model Value | Pass/Fail | Average Count | verage Modele | Num Obs |
|---|---|---|---|---|---|---|
| Coefficient of Determination ($R^2$) | > 0.88 | 0.95 | Pass | 10,421 | 10,481 | 1,766 |

| #5 - Root mean square for link volumes | Standard | Model Value | Pass/Fail | Average Count | verage Modele | Num Obs |
|---|---|---|---|---|---|---|
| AADT < 5,000 | < 100% | 63.69% | Pass | 2,230 | 2,345 | 822 |
| AADT = 5,000 - 9,999 | < 45% | 35.37% | Pass | 7,161 | 7,158 | 346 |
| AADT = 10,000 - 14,999 | < 35% | 26.98% | Pass | 12,416 | 12,466 | 187 |
| AADT = 15,000 - 19,999 | < 30% | 17.21% | Pass | 17,467 | 17,840 | 113 |
| AADT = 20,000 - 29,999 | < 27% | 17.66% | Pass | 24,080 | 24,338 | 171 |
| AADT = 30,000 - 49,999 | < 25% | 11.33% | Pass | 36,685 | 37,176 | 106 |
| AADT = 50,000 - 59,999 | < 20% | 6.83% | Pass | 52,700 | 52,845 | 6 |
| AADT > 60,000 | < 19% | 9.71% | Pass | 79,791 | 72,958 | 19 |
| Areawide | < 45% | 26.10% | Pass | 10,421 | 10,481 | 1766 |

| #7 - (Option) Root mean square by functional classif | Standard | Model Value | Pass/Fail | Average Count | verage Modele | Num Obs |
|---|---|---|---|---|---|---|
| Freeways/Expressways | < 20% | 13.85% | Pass | 29,896 | 30,794 | 223 |
| Principal Arterials | < 35% | 16.44% | Pass | 19,768 | 19,879 | 250 |
| Minor Artrerials | < 50% | 31.75% | Pass | 9,638 | 9,099 | 338 |
| Collectors | < 90% | 53.02% | Pass | 3,270 | 3,296 | 564 |

**Note**: the optional Test #6 for VMT by functional class is shown in the following table for each of the 10 counties included in the KRTM.

**Table G-15:** HPMS vs. KRTM VMT Comparison by County and Functional Class

| | Rural Int | Rural Principal Arterial | Rural Minor Arterial | Rural Major Collector | Rural Minor Collector | Rural Local | Urban Int | Urban Freeway | Urban Principal Arterial | Urban Minor Arterial | Urban Major Collector | Urban Minor Collector | Urban Local | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANDERSON HPMS | 504,792 | 32,921 | - | 171,309 | 64,809 | 69,801 | - | - | 665,757 | 303,626 | 153,153 | 31,696 | 311,192 | 2,309,056 |
| ANDERSON Model | 594,008 | 31,864 | - | 155,904 | 11,101 | 6,209 | | | 629,924 | 312,689 | 99,916 | 27,519 | 18,266 | 1,887,399 |
| HPMS Factor | 0.85 | 1.03 | N/A | 1.10 | 5.84 | 11.24 | N/A | N/A | 1.06 | 0.97 | 1.53 | 1.15 | 17.04 | 1.22 |
| BLOUNT HPMS | - | 195,499 | 84,877 | 19,685 | 65,741 | 136,140 | 89,422 | 27,928 | 1,016,348 | 464,579 | 368,747 | 43,606 | 564,908 | 3,077,480 |
| BLOUNT Model | - | 206,864 | 91,630 | 27,483 | 54,215 | 15,995 | 91,682 | 39,725 | 1,034,704 | 418,359 | 273,605 | 38,111 | 32,752 | 2,325,123 |
| HPMS Factor | N/A | 0.95 | 0.93 | 0.72 | 1.21 | 8.51 | 0.98 | 0.70 | 0.98 | 1.11 | 1.35 | 1.14 | 17.25 | 1.32 |
| GRAINGER HPMS | - | 232,710 | 156,822 | 70,883 | 58,857 | 71,663 | - | - | - | - | - | - | - | 590,935 |
| GRAINGER Model | - | 277,295 | 197,266 | 106,575 | 35,012 | - | - | - | - | - | - | - | - | 616,149 |
| HPMS Factor | N/A | 0.84 | 0.79 | 0.67 | 1.68 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.96 |
| HAMBLEN HPMS | 275,070 | 482 | - | 58,260 | 37,147 | 49,081 | 29,650 | - | 657,804 | 234,516 | 139,758 | 24,488 | 256,076 | 1,762,332 |
| HAMBLEN Model | 291,587 | 1,707 | - | 57,788 | 15,361 | 2,222 | 22,027 | - | 646,055 | 185,518 | 101,886 | 9,538 | 12,419 | 1,346,108 |
| HPMS Factor | 0.94 | 0.28 | N/A | 1.01 | 2.42 | 22.09 | 1.35 | N/A | 1.02 | 1.26 | 1.37 | 2.57 | 20.62 | 1.31 |
| JEFFERSON HPMS | 1,253,496 | - | 307,213 | 199,362 | 101,715 | 125,253 | 23,315 | - | 168,883 | 83,700 | 18,529 | 10,183 | 40,471 | 2,332,120 |
| JEFFERSON Model | 1,369,492 | - | 375,207 | 290,370 | 76,412 | 16,093 | 34,015 | | 148,437 | 91,145 | 4,219 | 6,097 | 2,248 | 2,413,735 |
| HPMS Factor | 0.92 | N/A | 0.82 | 0.69 | 1.33 | 7.78 | 0.69 | N/A | 1.14 | 0.92 | 4.39 | 1.67 | 18.01 | 0.97 |
| KNOX HPMS | 498,500 | - | 81,947 | 87,171 | 114,023 | 117,858 | 5,194,493 | 58,604 | 2,662,076 | 2,278,761 | 810,233 | 51,429 | 2,815,096 | 14,770,191 |
| KNOX Model | 568,491 | - | 93,163 | 84,706 | 106,077 | 24,747 | 4,810,925 | 40,353 | 2,385,072 | 2,016,508 | 769,529 | 37,081 | 540,068 | 11,476,721 |
| HPMS Factor | 0.88 | N/A | 0.88 | 1.03 | 1.07 | 4.76 | 1.08 | 1.45 | 1.12 | 1.13 | 1.05 | 1.39 | 5.21 | 1.29 |
| LOUDON HPMS | 425,354 | 123,144 | 56,845 | 34,913 | 75,017 | 53,020 | 712,839 | - | 236,222 | 131,482 | 165,584 | 33,335 | 320,137 | 2,367,892 |
| LOUDON Model | 451,161 | 147,326 | 64,106 | 57,117 | 30,014 | - | 795,428 | - | 222,638 | 106,862 | 173,733 | 23,505 | 8,387 | 2,080,277 |
| HPMS Factor | 0.94 | 0.84 | 0.89 | 0.61 | 2.50 | N/A | 0.90 | N/A | 1.06 | 1.23 | 0.95 | 1.42 | 38.17 | 1.14 |
| ROANE HPMS | 258,148 | 58,862 | 61,713 | 58,359 | 54,854 | 55,823 | 595,334 | - | 338,293 | 184,610 | 29,439 | 43,383 | 123,163 | 1,861,981 |
| ROANE Model | 309,181 | 61,735 | 68,516 | 54,957 | 14,350 | - | 635,035 | - | 387,112 | 162,586 | 19,794 | 27,029 | 17,319 | 1,757,613 |
| HPMS Factor | 0.83 | 0.95 | 0.90 | 1.06 | 3.82 | N/A | 0.94 | N/A | 0.87 | 1.14 | 1.49 | 1.61 | 7.11 | 1.06 |
| SEVIER HPMS | - | 231,153 | 425,109 | 142,182 | 119,357 | 416,818 | 309,868 | - | 989,100 | 266,983 | 258,441 | 35,947 | 587,979 | 3,782,937 |
| SEVIER Model | - | 207,165 | 476,599 | 156,989 | 43,862 | 46,836 | 312,511 | | 928,794 | 234,026 | 222,986 | 23,296 | 32,650 | 2,685,714 |
| HPMS Factor | N/A | 1.12 | 0.89 | 0.91 | 2.72 | 8.90 | 0.99 | N/A | 1.06 | 1.14 | 1.16 | 1.54 | 18.01 | 1.41 |
| UNION HPMS | - | - | 142,415 | 89,821 | 38,505 | 58,204 | - | - | - | - | - | - | - | 328,945 |
| UNION Model | - | - | 164,629 | 124,609 | 27,198 | - | - | - | - | - | - | - | - | 316,435 |
| HPMS Factor | N/A | N/A | 0.87 | 0.72 | 1.42 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1.04 |

**Figure G-16:** KRTM Linear Regression Analysis, Daily Traffic Count vs Model Volume

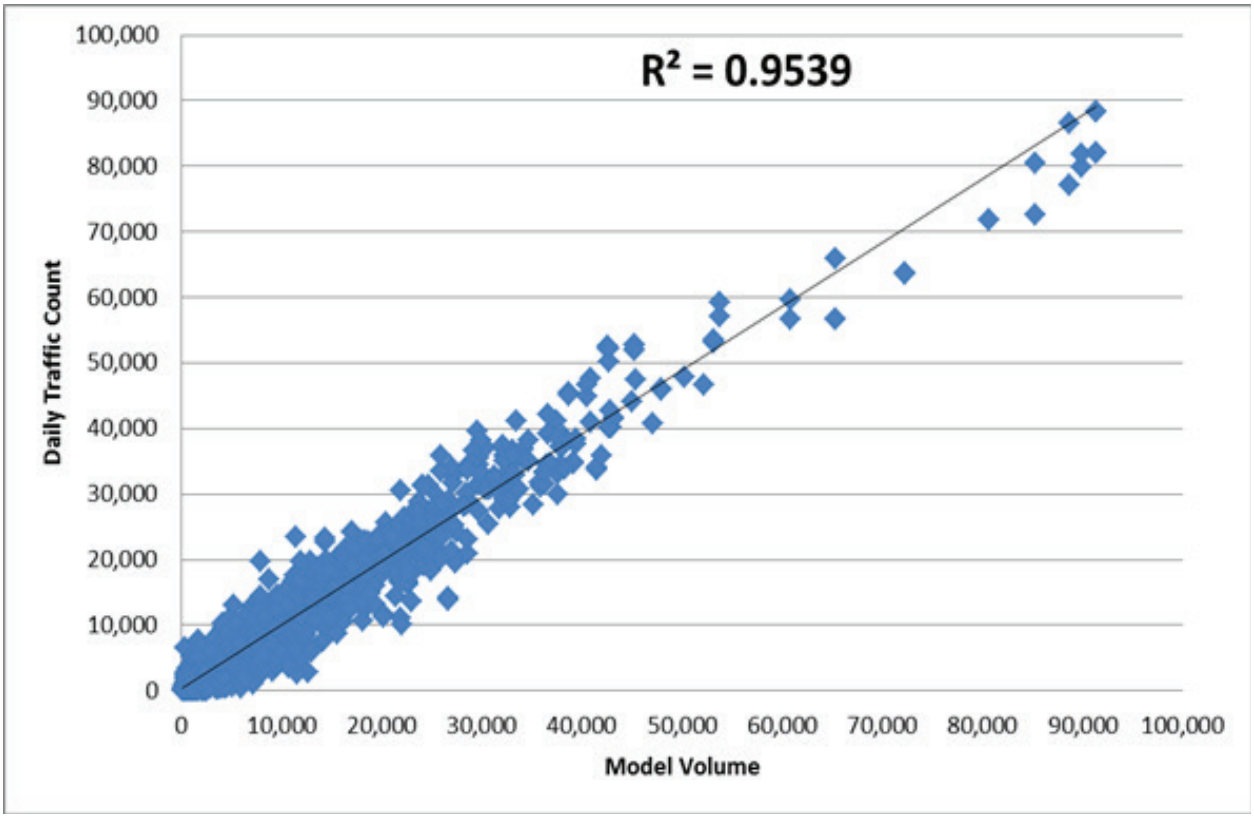
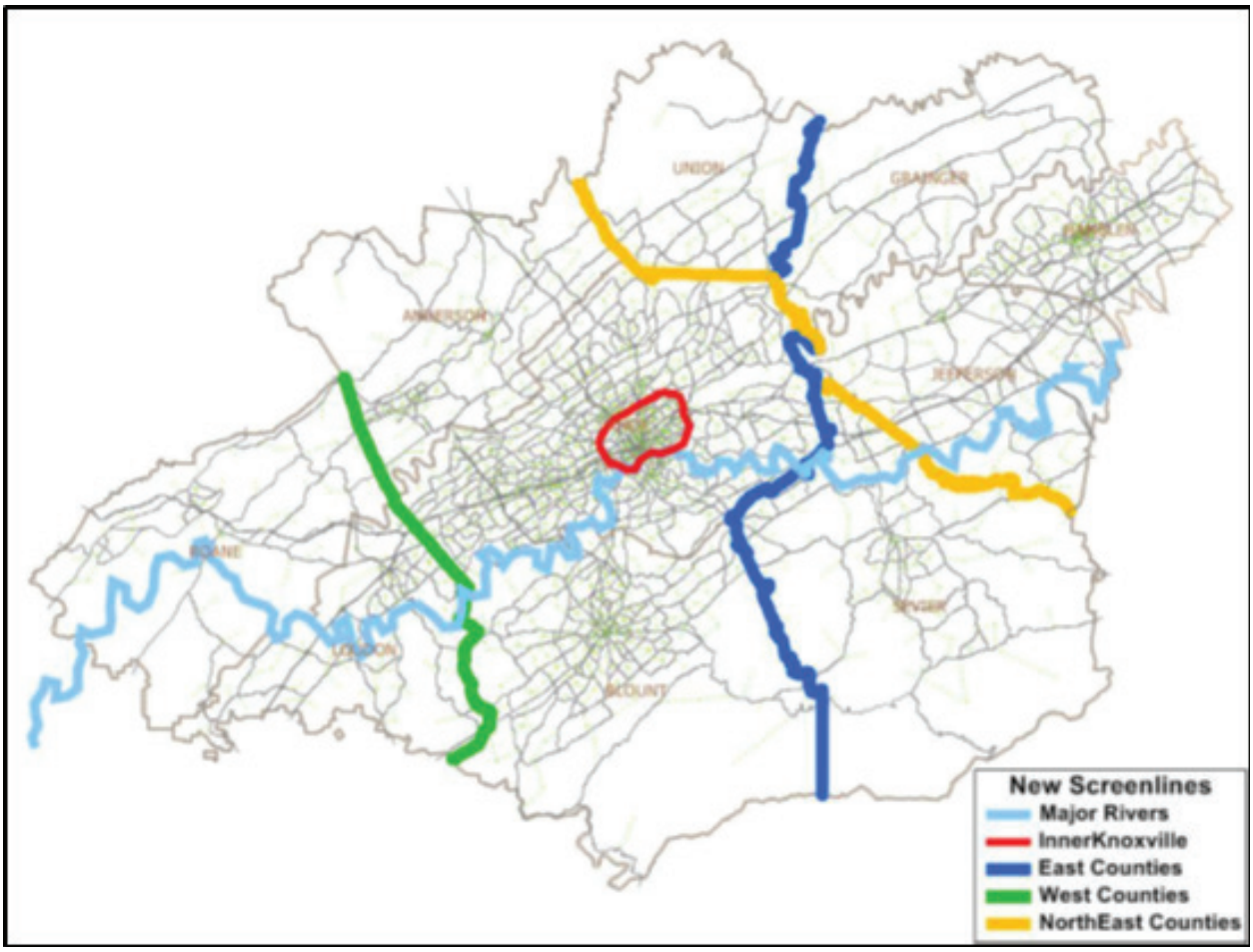


**Figure G-17:** KRTM Screenlines



# X. Traffic Assignment Validation – Other Tests in TN Model Guidelines

Other traffic assignment validation checks included in the TN Model Guidelines were made as follows:

## A. Percent Error by Volume Group and Roadway Designs

The following table (G-18) demonstrates that the model is well within the preferable benchmarks for traffic volume percent error statistics by volume groupings that are traditionally associated with roadway types and number of lanes.

**Table G-18:** Percent Error by Volume Group and Roadway Design

| | Percent Error | | Benchmarks | |
|---|---|---|---|---|
| Volume Group/Roadway Design | KRTM | LAMTPO | Acceptable | Preferable |
| LT 10,000 (2L road) | 1.6% | -2.1% | 50% | 25% |
| 10,000 - 30,000 (4L road) | -0.8% | -5.9% | 30% | 20% |
| 30,000 - 50,000 (6L road) | -4.4% | 0.7% | 25% | 15% |
| 50,000 - 65,000 (4-6L freeway) | 5.3% | 3.5% | 20% | 10% |
| 65,000 - 75,000 (6L freeway) | 2.7% | 0.9% | 15% | 5% |
| GT 75,000 (8+L freeway) | -2.6% | N/A | 10% | 5% |

## B. Aggregate Vehicle Miles of Travel (VMT) Statistics

The TN Model Guidelines discuss two different types of aggregate VMT checks as shown in the following two tables. The first table (G-19 illustrates the percent of VMT by facility type in each of the KRTM and LAMTPO models. The modeled values for the KRTM fall generally within the expected ranges as reported in the Guidelines. The modeled values for the LAMTPO model are significantly outside of the expected ranges however this is most likely due to the fact that the modeled region is much smaller than the KRTM and is skewed by a significant amount of Interstate mileage from I-40 and I-81 in the LAMTPO model region that dominates the amount of VMT on the overall system.

**Table G-19:** Percent of VMT by Facility Type

| | Vehicle Miles Traveled (VMT) | | Percent Urban Area VMT | | Expected Range | |
|---|---|---|---|---|---|---|
| Facility Type | KRTM | LAMTPO | KRTM | LAMTPO | KRTM | LAMTPO |
| Freeways/Expressways | 10,544,463 | 1,515,014 | 40.0% | 44.4% | 33-38% | 18-23% |
| Principal Arterials | 7,332,306 | 799,913 | 27.8% | 23.5% | 27-33% | 37-43% |
| Minor Arterials | 5,074,894 | 527,277 | 19.3% | 15.5% | 18-22% | 25-28% |
| Collectors | 3,389,758 | 566,252 | 12.9% | 16.6% | 8-12% | 12-15% |

The second table (G-20 compares the modeled versus observed VMT by functional classification. It is evident from the reported values that the overall KRTM is well within the preferred benchmarks indicating a good validation of the model. The LAMTPO model is also generally within the acceptable benchmarks although in all cases it is under representing total VMT since part of Jefferson County is not included in the model area however its observed VMT values do not account for this.

**Table G-20:** Percent VMT Error by Facility Type

| | | | | | | | Benchmarks | |
|---|---|---|---|---|---|---|---|---|
| Facility Type | KRTM VMT Observed | KRTM VMT Modeled | % Error | LAMTPO VMT Observed | LAMTPO VMT Modeled | % Error | Acceptable | Preferable |
| Freeways/Expressways | 10,256,813 | 10,365,622 | 1.1% | 1,581,531 | 1,515,014 | -4.2% | +/- 7% | +/- 6% |
| Principal Arterials | 7,609,254 | 7,316,692 | -3.8% | 827,169 | 799,913 | -3.3% | +/- 15% | +/- 10% |
| Minor Arterials | 5,265,198 | 5,058,809 | -3.9% | 625,429 | 527,277 | -15.7% | +/- 15% | +/- 10% |
| Collectors | 3,879,921 | 3,387,943 | -12.7% | 589,442 | 566,252 | -3.9% | +/- 25% | +/- 20% |
| All Links | 27,011,186 | 26,129,065 | -3.3% | 3,623,571 | 3,408,456 | -5.9% | +/- 5% | +/- 2% |

## C. Peak Hours/Period Validation Targets

The KRTM utilizes three time periods – AM Peak (6 – 9 a.m.), PM Peak (3 – 6 p.m.) and the rest of the day. No peak period validation tests have been performed on any version of the KRTM to date primarily due to issues of obtaining traffic count data in the proper format to enable comparisons. It would be extremely time consuming to compile hourly count data for use in developing this validation test however the TPO staff would be interested in discussing options with TDOT staff for ways to obtain the hourly count information.

## D. Automobile Occupancy

The following table (G-21) depicts the auto occupancy rates for the major tour types in the KRTM. As noted previously, there are some definitional differences between tours and trips from a traditional 4-step model that make direct comparison with benchmarks less useful. The rates observed from the HHTS are therefore also shown in the table which indicates good agreement between the modeled rates and actual behavior.

**Table G-21:** Auto Occupancy Rates

| | Auto Occupancy Rates | | Benchmarks | |
|---|---|---|---|---|
| Trip Purpose | Observed | Modeled | Low | High |
| HBW | 1.12 | 1.11 | 1.05 | 1.1 |
| HBSchool | 1.91 | 2.02 | 1.5 | 1.8 |
| HBO | 1.52 | 1.48 | 1.6 | 1.95 |
| NHB | 1.49 | 1.55 | 1.6 | 1.9 |

# Section 3
# Population Projection Control Totals

## Background

The Knoxville Regional TPO is required by federal regulations to prepare and regularly update a "Long Range Transportation Plan" (LRTP) that covers a planning horizon of at least twenty (20) years into the future. The most recent LRTP, known as the "Knoxville Regional Mobility Plan 2040" was adopted in April 2013 and must be updated by April 2017. The requirement to update the LRTP every four years ensures that latest planning assumptions are used. One of the key planning assumptions that goes into the development of the LRTP is the forecasting of the region's expected growth in population and employment, which are key drivers of transportation demand. Various sources of population projections are reviewed and a recommendation for a particular source for each major county within the TPO's Planning Area in the following sections of this document.

## Summary of Projection Sources

There were four different sources of projection data used in this review. A summary of each source follows below in order by its "release" date and they are shown graphically for each county in the TPO Planning Area at the end of this section.

1. Knoxville TPO Socioeconomic Projections for 2013 Mobility Plan/PlanET – These projections were prepared in early 2012 by a consulting firm under contract with the TPO to prepare an update to its travel demand forecasting model. Projections of several key variables in addition to population were produced including employment by four major sectors, percentage of senior population and percentage of school age population. These projections were subsequently directly utilized for the PlanET.
2. Woods & Poole Economics 2013 Data – Woods & Poole Economics, Inc is a private company based in Washington D.C. that prepares forecasts of various socioeconomic characteristics including population and employment for every county in the entire nation. The 2013 data set was purchased for the entire state of Tennessee by TDOT and provided to the Knoxville TPO.
3. U.T. Center for Business & Economic Research (CBER) – CBER regularly prepares population forecasts for the State of Tennessee for use by governmental entities in planning for the future. The most recent set of projections was produced in August 2013 and spanned out to the year 2064. The primary drawback of the CBER projections is that no accompanying forecasts of employment are produced.
4. Woods & Poole Economics 2015 Data – The TPO recently acquired the most current set of projections prepared by Woods & Poole. The population projections have been normalized to the year 2013 census population estimates that were released last year.

# Basis of TPO Staff Recommendation for Projection Data Source

The TPO staff reviewed each projection data source for all counties containing portions of the TPO Planning Area including: Anderson, Blount, Knox, Loudon, Roane and Sevier. The default position of staff is to continue to use the socioeconomic forecasts that were produced by its consultant and utilized for the recently completed PlanET visioning effort. The staff feels that these projections should still be considered valid given that there have not been major changes in the regional economy to suggest otherwise during the time frame since they were produced. Additionally, as noted above, the PlanET projections have the advantage of including other socioeconomic variables needed for the TPO's travel demand forecasting model inputs.

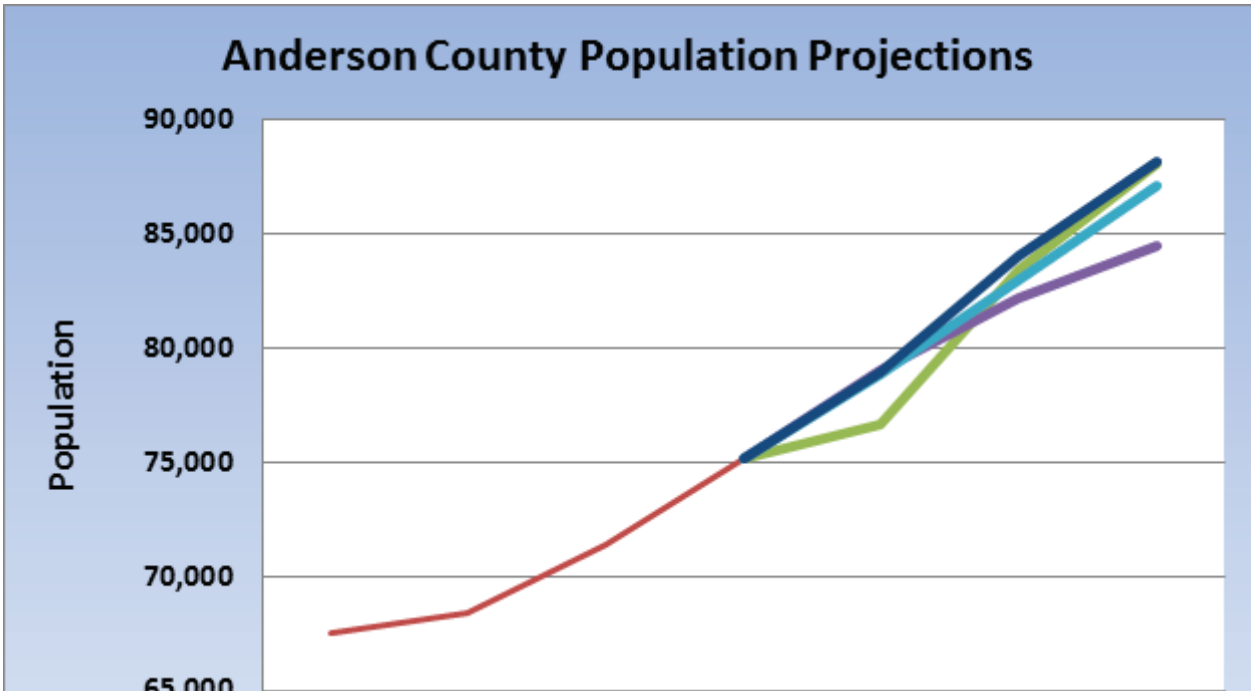
The following pages include charts for each county in the TPO Planning Area showing the projections from each of the four sources that were reviewed. In almost every instance the "PlanET" projections are the highest in 2040 while the CBER projections are the lowest and the W&P projections are roughly in the middle. A percentage difference between the PlanET and CBER projections is also shown for each county for the years 2020, 2030 and 2040. On a six-county regional basis there is a less than 10% difference between the PlanET and CBER projections for the year 2040.

# TPO Executive Board Endorsement

The TPO staff presented the information on population control total sources to the TPO Technical Committee and Executive Board on August 11 and August 26, 2015 respectively for their review and endorsement of a recommended source. The TPO Executive Board voted unanimously to endorse the TPO staff recommendation as described above for use in the 2017 update of the 2040 Mobility Plan.

# County-Level Summaries of Population Projections

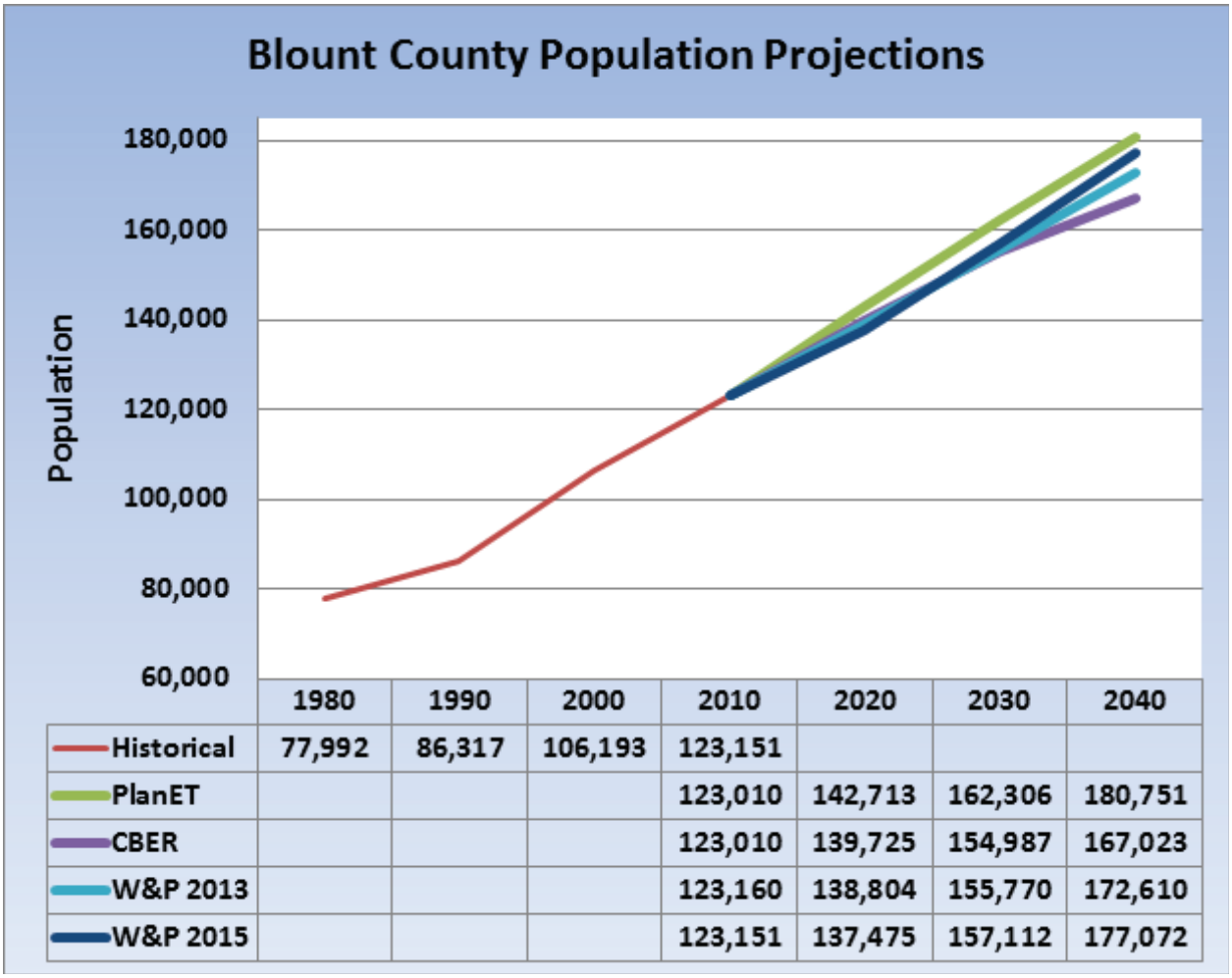
## Anderson County:




| | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 |
|---|---|---|---|---|---|---|---|
| Historical | 67,498 | 68,406 | 71,357 | 75,147 | | | |
| PlanET | | | | 75,129 | 76,609 | 83,449 | 88,045 |
| CBER | | | | 75,129 | 79,061 | 82,202 | 84,438 |
| W&P 2013 | | | | 75,117 | 78,808 | 83,010 | 87,135 |
| W&P 2015 | | | | 75,147 | 78,959 | 84,006 | 88,140 |

| PlanET Difference from CBER | |
|---|---|
| 2020 | -3.1% |
| 2030 | 1.5% |
| 2040 | 4.3% |

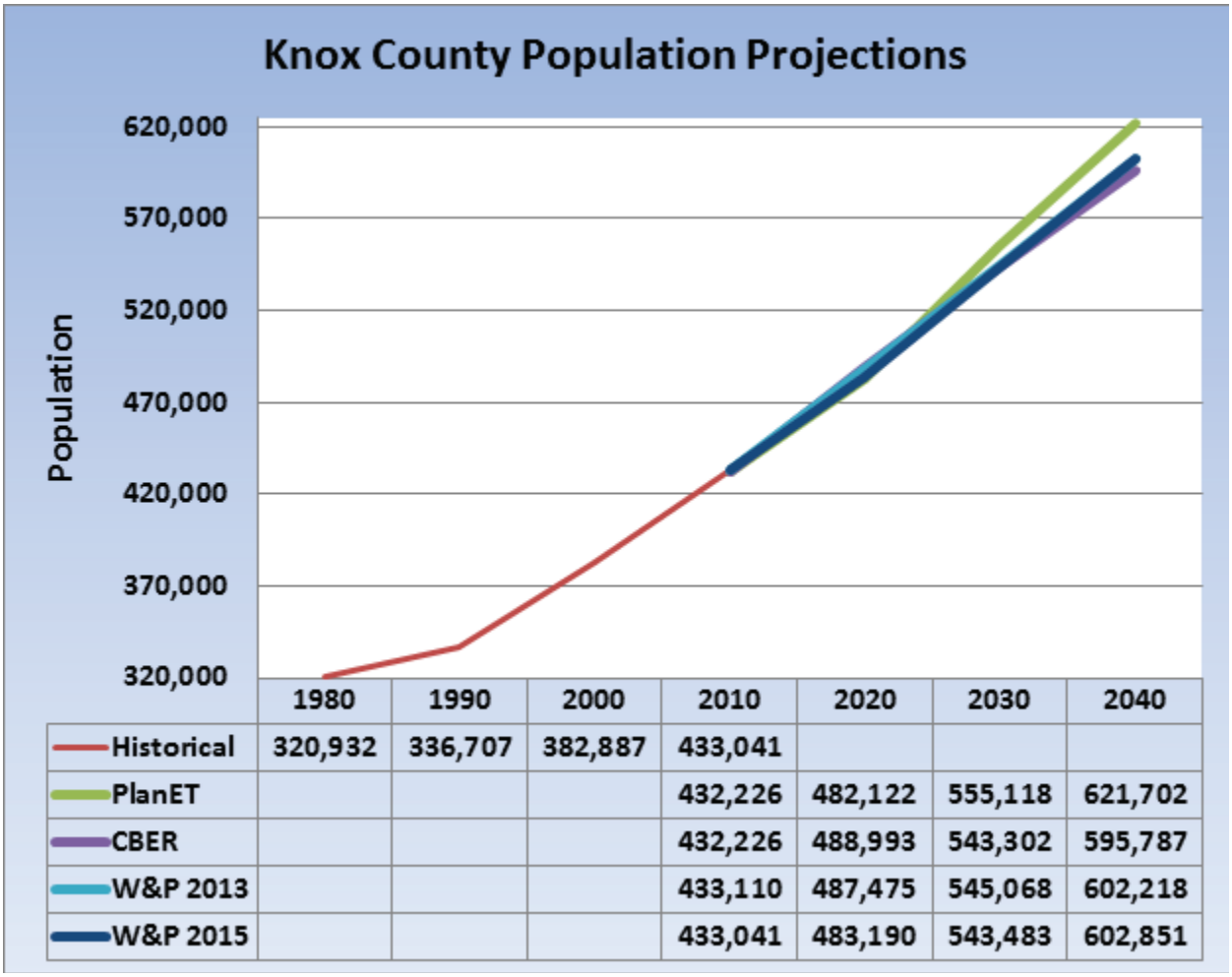
## Blount County:




| | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 |
|---|---|---|---|---|---|---|---|
| Historical | 77,992 | 86,317 | 106,193 | 123,151 | | | |
| PlanET | | | | 123,010 | 142,713 | 162,306 | 180,751 |
| CBER | | | | 123,010 | 139,725 | 154,987 | 167,023 |
| W&P 2013 | | | | 123,160 | 138,804 | 155,770 | 172,610 |
| W&P 2015 | | | | 123,151 | 137,475 | 157,112 | 177,072 |

| PlanET Difference from CBER | |
|---|---|
| 2020 | 2.1% |
| 2030 | 4.7% |
| 2040 | 8.2% |

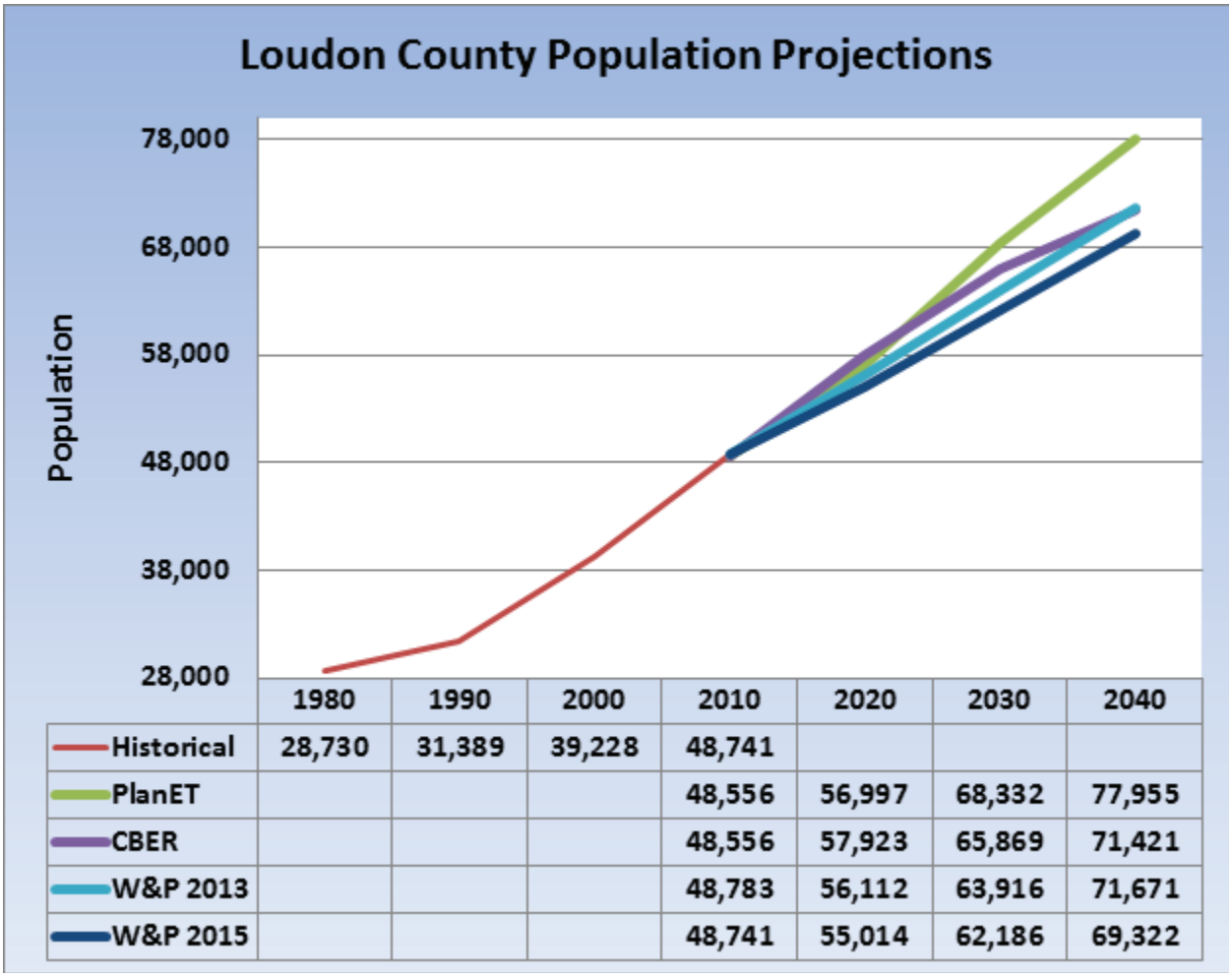
## Knox County:




| | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 |
|---|---|---|---|---|---|---|---|
| Historical | 320,932 | 336,707 | 382,887 | 433,041 | | | |
| PlanET | | | | 432,226 | 482,122 | 555,118 | 621,702 |
| CBER | | | | 432,226 | 488,993 | 543,302 | 595,787 |
| W&P 2013 | | | | 433,110 | 487,475 | 545,068 | 602,218 |
| W&P 2015 | | | | 433,041 | 483,190 | 543,483 | 602,851 |

| PlanET Difference from CBER | |
|---|---|
| 2020 | -1.4% |
| 2030 | 2.2% |
| 2040 | 4.3% |

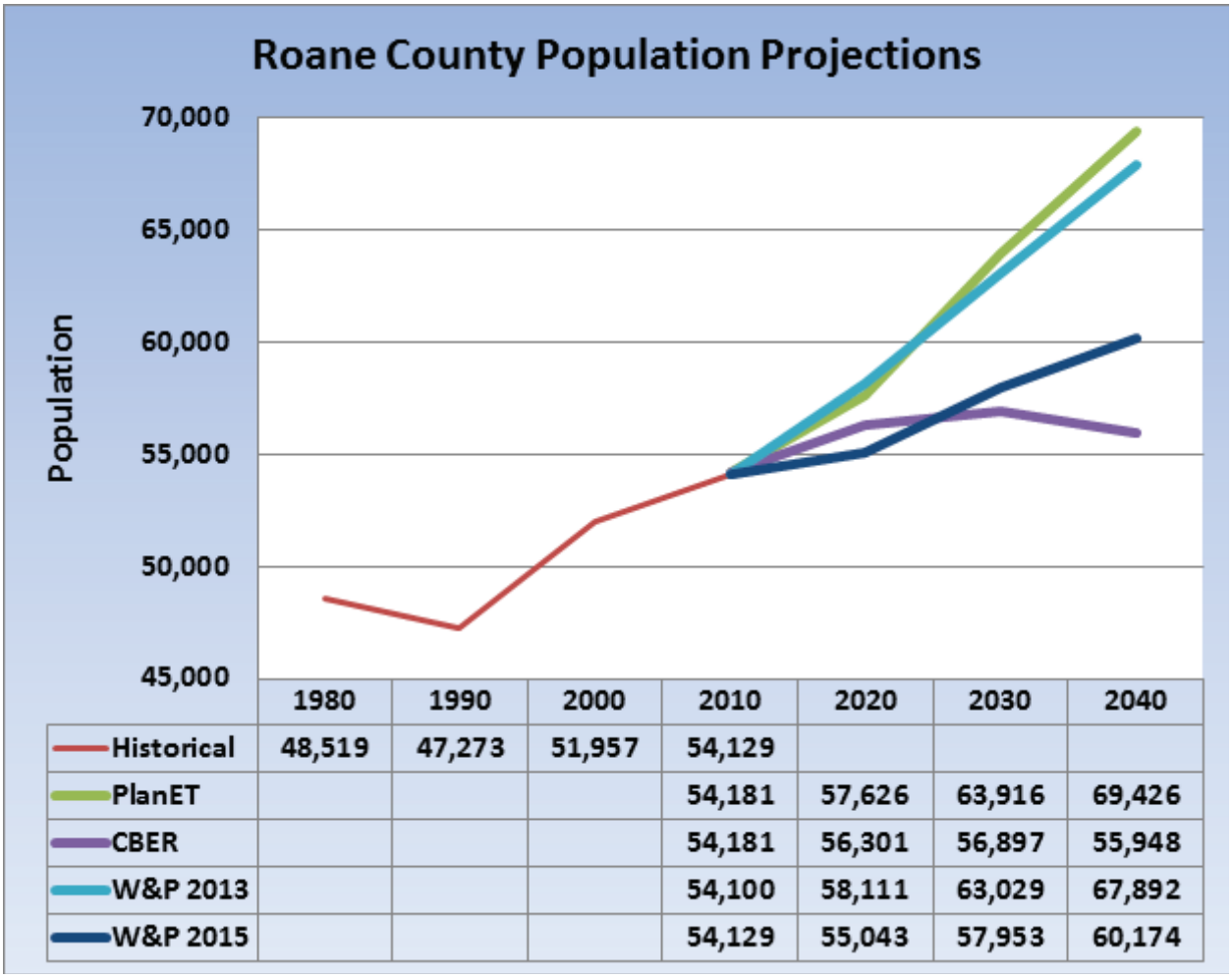
## Loudon County:




| | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 |
|---|---|---|---|---|---|---|---|
| Historical | 28,730 | 31,389 | 39,228 | 48,741 | | | |
| PlanET | | | | 48,556 | 56,997 | 68,332 | 77,955 |
| CBER | | | | 48,556 | 57,923 | 65,869 | 71,421 |
| W&P 2013 | | | | 48,783 | 56,112 | 63,916 | 71,671 |
| W&P 2015 | | | | 48,741 | 55,014 | 62,186 | 69,322 |

| PlanET Difference from CBER | |
|---|---|
| 2020 | -1.6% |
| 2030 | 3.7% |
| 2040 | 9.1% |

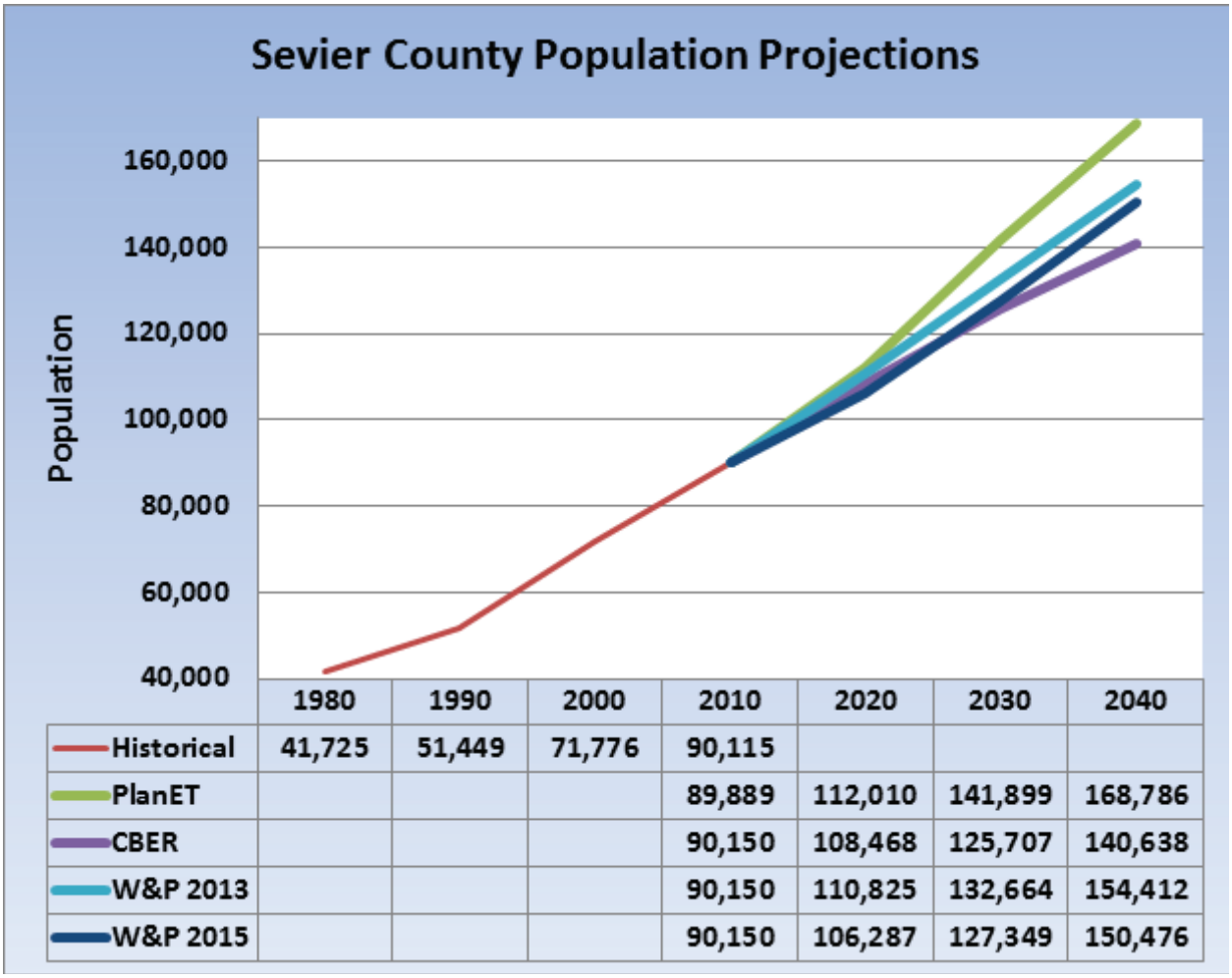
## Roane County:




| | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 |
|---|---|---|---|---|---|---|---|
| Historical | 48,519 | 47,273 | 51,957 | 54,129 | | | |
| PlanET | | | | 54,181 | 57,626 | 63,916 | 69,426 |
| CBER | | | | 54,181 | 56,301 | 56,897 | 55,948 |
| W&P 2013 | | | | 54,100 | 58,111 | 63,029 | 67,892 |
| W&P 2015 | | | | 54,129 | 55,043 | 57,953 | 60,174 |

| PlanET Difference from CBER | |
|---|---|
| 2020 | 2.4% |
| 2030 | 12.3% |
| 2040 | 24.1% |

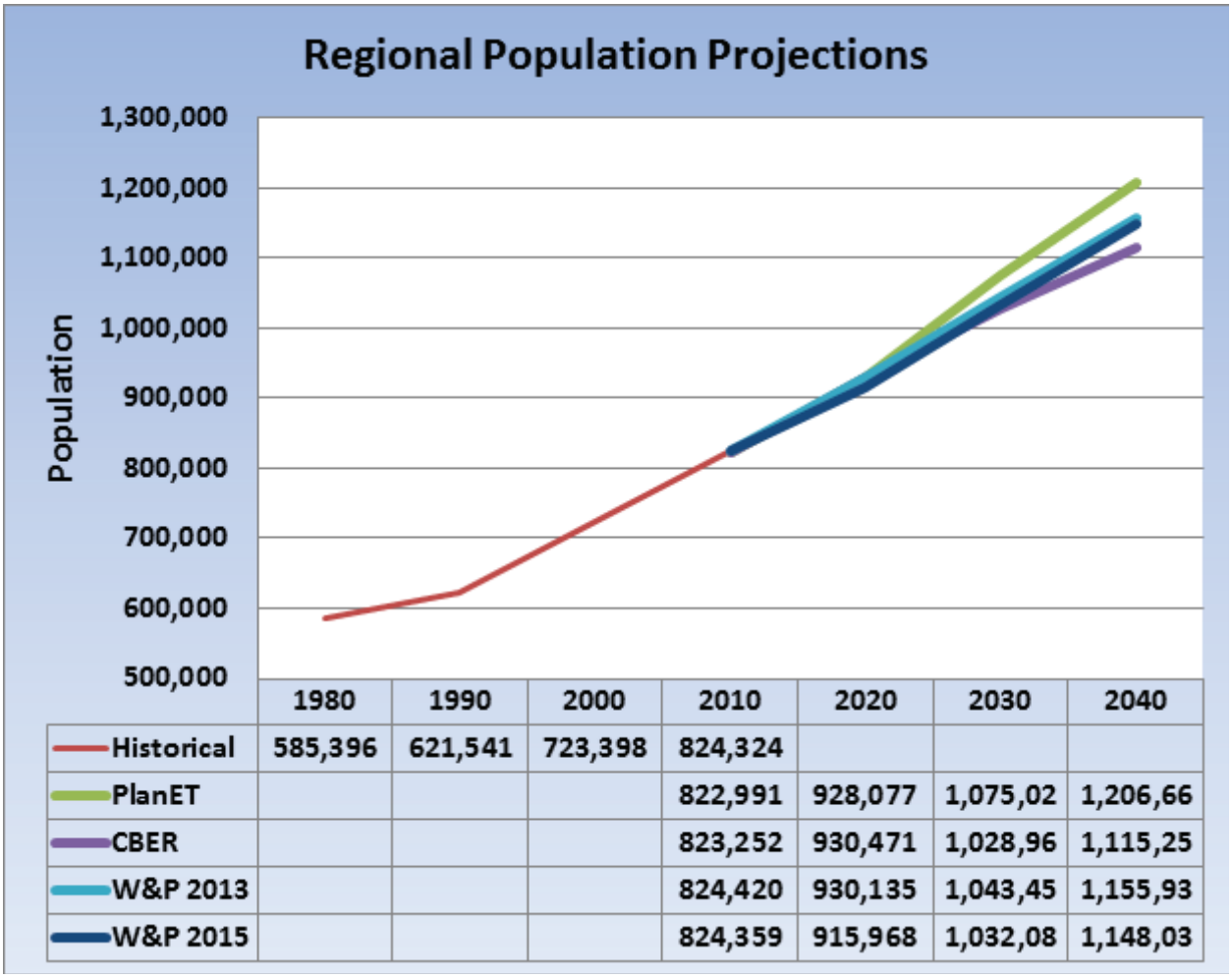
## Sevier County:




| | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 |
|---|---|---|---|---|---|---|---|
| Historical | 41,725 | 51,449 | 71,776 | 90,115 | | | |
| PlanET | | | | 89,889 | 112,010 | 141,899 | 168,786 |
| CBER | | | | 90,150 | 108,468 | 125,707 | 140,638 |
| W&P 2013 | | | | 90,150 | 110,825 | 132,664 | 154,412 |
| W&P 2015 | | | | 90,150 | 106,287 | 127,349 | 150,476 |

| PlanET Difference from CBER | |
|---|---|
| 2020 | 3.3% |
| 2030 | 12.9% |
| 2040 | 20.0% |

## 6-County Region:




| | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 |
|---|---|---|---|---|---|---|---|
| Historical | 585,396 | 621,541 | 723,398 | 824,324 | | | |
| PlanET | | | | 822,991 | 928,077 | 1,075,02 | 1,206,66 |
| CBER | | | | 823,252 | 930,471 | 1,028,96 | 1,115,25 |
| W&P 2013 | | | | 824,420 | 930,135 | 1,043,45 | 1,155,93 |
| W&P 2015 | | | | 824,359 | 915,968 | 1,032,08 | 1,148,03 |

| PlanET Difference from CBER | |
|---|---|
| 2020 | -0.3% |
| 2030 | 4.5% |
| 2040 | 8.2% |

# APPENDIX H
# CONGESTION MANAGEMENT PROCESS

The ability to reach one's destination in a timely manner is a critical component of the quality of life for residents and visitors in the Knoxville Region. Traffic congestion detracts from quality of life, especially if it is not managed and is allowed to increase over time. The Knoxville Congestion Management System (CMS) Plan was adopted on February 26, 2003. It was established as a mechanism to identify congestion in the TPO Planning Area and to propose appropriate solutions to deal with it. With the passage of SAFETEA-LU in 2005, the Congestion Management System requirement was changed to a Congestion Management "Process" (CMP). The intent of the name change was to ensure that congestion management would be treated as an integral part of an ongoing planning process. As a result, the TPO staff prepares updates to the CMP in conjunction with each major Long Range Mobility Plan update.

## What is a CMP?

A CMP is a systematic and regionally accepted approach for managing congestion. It includes a mechanism for measuring transportation system performance and assessment of alternative strategies to mitigate congestion to an acceptable level within the appropriate context. It is recognized that different levels of congestion can be considered acceptable based on the particular circumstances and land use context. For example, people generally tend to expect a certain level of roadway congestion within urban areas, and the amount of capacity devoted to motor vehicles must be balanced against providing adequate accommodations for other modes of travel such as walking, biking, and taking public transportation. Furthermore, eliminating congestion altogether may not be desired if it comes at the expense of economic vitality, community livability, or bicycle and pedestrian access.

## Required Elements of a CMP

A CMP is made up of several elements that are performed in a continuous and ongoing process (Figure X). The process begins with the identification of broad regional objectives that relate to transportation system performance and congestion, which ties back to the FAST Act Planning Factor, "Promote efficient system management and operation." The steps of the process can be summarized as:

- Developing methods to identify congested locations
- Analyzing the congestion problems to identify appropriate mitigation strategies
- Programming and implementing projects and programs that will reduce congestion

The process then repeats itself as the transportation system is continuously monitored and regional objectives are reassessed, which typically occurs concurrent with the four-year major update cycle of the Mobility Plan.

# Identifying Congestion

Identification of congestion involves a series of steps:

- Identify the system that is to be monitored for congestion.
- Identify performance measures to determine what is considered congested.
- Identify a data collection mechanism to monitor the performance measures that were selected.

A CMP is required in urbanized areas with a population of greater than 200,000—known as Transportation Management Areas (TMA). As a result, the Knoxville Regional TPO concentrates much of its data collection efforts within the urbanized area. However, since the travel demand forecasting model includes the entire nonattainment area, it is possible to include some measures of congestion for the entire Knoxville Region, as described below.

1. **Identify Methods to Monitor and Evaluate the Performance of the Multimodal Transportation System.**
   Since the personal automobile is the predominant mode of transportation in the Knoxville Region, and the street and highway system affects the mobility of other modes such as freight and public transit, it was originally determined that the CMP should include all roadways that carry an average daily traffic volume of 10,000 vehicles or more. In subsequent iterations of the CMP, this network has been expanded to encompass the majority of the federal-aid roadway system (those roadways functionally classified as a collector or higher) due to data availability and the fact that those roadways are included in the TPO travel demand model.
2. **Identify the Mechanism to Select Appropriate Performance Measures.**
   This element involves the definition of parameters used to measure the extent of congestion based on locally determined thresholds for system performance. Traditionally, there have been two categories of performance measures that were selected to determine congestion in the Knoxville Region: Volume-to-Capacity ratio (V/C ratio) and Travel Time for average speed and stopped delay. There has been a modification to the travel time element for this version of the CMP as described further below.

   The V/C ratio compares traffic volume of a roadway in the peak hour to theoretical capacity of the roadway to determine whether traffic flow is effectively accommodated. One main reason that the V/C ratio was chosen as a performance measure is its ability to use the TPO's travel demand forecasting model to determine possible future congestion in both the urban and regional areas. Outputs from the travel demand model showing congestion in base year 2014 and future year 2040 (assuming no improvements have been made) were included in Appendix G.

The Travel Time performance measure allows the TPO to document roadway congestion in terms that are easier to understand by the public. Previously, these measures had been based on actual speed data collected using GPS units attached to vehicles that travel on roadways in times of peak hour congestion. Due to the extensive amount of time and resources necessary to collect the GPS data, the TPO staff is in the process of switching to vendor-provided vehicle probe data that has been acquired by TDOT from a company known as "HERE". This data provides for much greater sample size and network coverage than was previously available from the GPS data.

The HERE travel time data was aggregated for weekdays in year 2015 for an AM peak period (7:00 am – 8:30 am) and a PM peak period (5:00 pm – 6:30 pm) and summarized by major segments of the CMP corridors. The travel time data was used to compute a "Level of Travel Time Reliability" or LOTTR, which is one of the system performance measures in the FAST Act. The LOTTR is defined as the 80th percentile travel time divided by the 50th percentile travel time, which provides an indication of the variability of travel times on each roadway. The higher that the LOTTR value is indicates the more unreliable the roadway corridor will tend to be which affects travelers' ability to adequately plan for the amount of time a trip will take on average.

3. **Establish a Program for Data Collection and System Monitoring.**
   This component includes development of a data collection program that provides for adequate system monitoring to identify causes of congestion. As previously mentioned, the TPO acquired HERE travel time data through TDOT for year 2015 and will need to coordinate with TDOT for future travel time data acquisitions. Other transportation data, such as hourly traffic volume counts, feed into the CMP and are provided by various agencies in the area. Using the collected data and performing technical analyses based on the performance measures identified above, roadway corridors and segments that qualify as being congested can be identified.

# Congested Locations

Based upon the performance measures and system monitoring information described above, the TPO identifies congestion in terms of contiguous segments of roadway with similar characteristics and roadway capacity that qualify as congested under the V/C performance measure criteria as "Congested Corridors" Priority levels were established for the corridors based on the horizon year in which the roadway is congested, so, for example, a roadway that is already congested receives a higher priority than one that is projected to be congested in a future year, such as 2022, 2030, or 2040. Table H-1 at the end of this appendix section provides a full listing of corridors identified as congested.

# Strategies of Congestion Management

The intent of CMP regulations is, first, to investigate mitigation strategies that focus on improving transportation operations and managing the existing system more efficiently; and, second, to reduce travel demand as a means to reduce congestion before resorting to new roadway construction or widening projects that serve single occupant vehicles (SOV).

The Knoxville CMP identifies a menu of congestion mitigation strategies that provide for a stepwise method of evaluating operational and travel demand-reducing improvements, prior to determining that additional SOV capacity is warranted:

- Transportation Demand Management (TDM)
- System Management & Operations (M&O) Strategies
- Intelligent Transportation Systems (ITS)
- Public Transportation Improvements
- Additional System Capacity (Projects)

Additional system capacity is used as a "last resort." However, it is sometimes necessary given the realities of increasing population growth and economic activity, which can over-burden roadways that were not designed to handle the amounts of traffic they are experiencing both now and in the future.

In the past, the TPO staff has organized a group of stakeholders and operations partners from each jurisdiction and agency represented on the Technical Committee to identify which strategies were appropriate for each congested corridor. Table H-1 provides a cross-reference of the projects in the Plan that address the congested corridors.

CMP regulations require that areas such as the Knoxville Region, which are designated in nonattainment of the Ozone standard, include complementary mitigation strategies that increase effectiveness and preserve capacity of a project that significantly increases capacity for single occupant vehicles (SOV). Table H-2 identifies all of the projects within the Knoxville TMA that significantly increase capacity for SOV and the complementary strategies that are included with such projects. For example, all road-widening projects in the TPO area are recommended to include non-traditional mode incentives, such as sidewalks and bicycle lanes at a minimum and provisions for transit vehicles where appropriate.

Additional TDM, operations/ITS, and public transportation strategies are continuously being implemented to mitigate congestion as described in subsequent sections of this chapter and are not specifically noted in Appendix I.

# Summary of CMP Interaction with the Overall Planning Process

The CMP is not intended to supersede other elements of the transportation planning process, nor is it intended to prioritize all transportation projects. The primary purpose of the CMP is to provide for a more informed decision-making process that can be used to make the most effective use of limited resources to address congestion problems.

The project selection criteria for the Mobility Plan, TIP, and CMAQ program have been modified to address results from the CMP. The scoring system used in the above criteria provides a direct mechanism for the CMP to be considered in the project selection process, which ultimately determines the projects to be implemented.

# Technical Evaluation of CMP Network - Overview

Table H-1 lists all roadway corridors in the TPO's Metropolitan Planning Area (MPA) covered in the CMP. Table I 6 are the projects with additional capacity for single occupant vehicles that resulted from the CMP analysis.

# Congested Corridor Identification

The TPO uses a V/C ratio threshold of 0.85 to determine roadways that are becoming congested for this Plan. In simple terms, this means that a roadway has reached 85 percent of its theoretical capacity, and therefore traffic operations are becoming unstable. As the V/C ratio approaches 1.0 the traffic flow starts to break down, and even minor disruptions can cause major queues as disruption waves propagate through the upstream traffic flow. There is also a strong correlation between high V/C ratios and crash rates.

The travel demand model was run for the base year of 2014 and for future socioeconomic conditions in years 2022, 2030 and 2040 in order to determine potential congested areas on the existing plus committed roadway network. Tables Table I 1 through Table I 5 and Exhibit X show the results of the V/C analysis for each travel demand model network year. The corridors are color-coded based on the first horizon year in which the corridor reaches a V/C ratio of 0.85, i.e. purple for year 2014, red for year 2022, orange for year 2030 and yellow for 2040. These tables also include information about the strategies that have been selected to mitigate congestion and the project ID if there is a roadway project included in the Mobility Plan that addresses the corridor.

# Congested Corridors

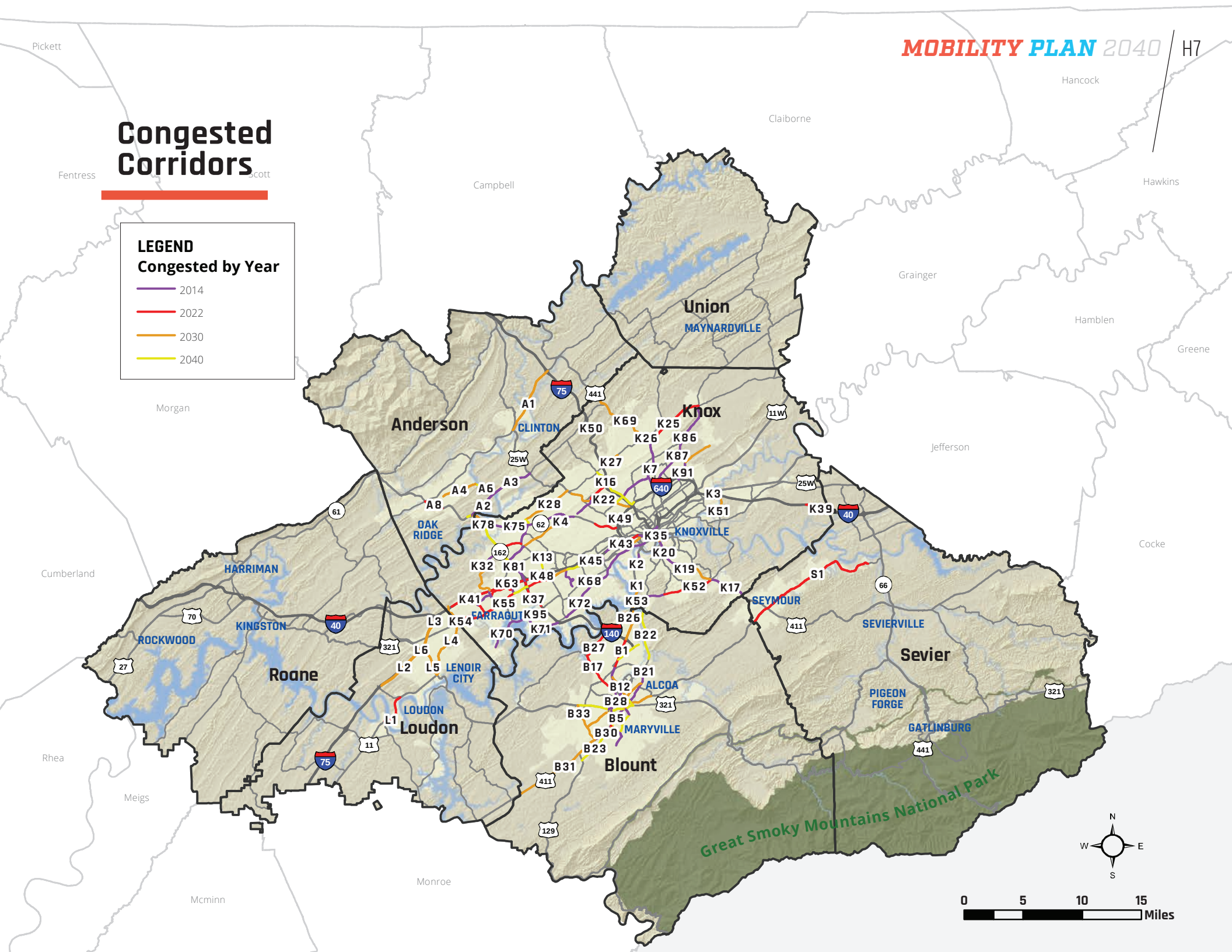


**Table H-1:** TPO Regional Congested Corridors

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Anderson County** | | | | | | | | | | | | | | |
| Charles G. Seviers Blvd | SR 9 - I-75 | A1 | 34,500 | 0.71 | 0.80 | 0.95 | 1.10 | 1.27 | 1.32 | X | | | | |
| Clinch Ave | Edgemoor Rd - SR 61 | | 35,700 | 0.54 | 0.60 | 0.67 | 0.76 | 1.20 | 1.20 | | | | | |
| Edgemoor Rd | SR 62 - Melton Lake Rd | A2 | 16,900 | 0.87 | 1.00 | 1.13 | 1.29 | 1.13 | 1.78 | X | | | X | 09-101a |
| | Melton Lake Rd - Clinton Hwy | A3 | 16,900 | 0.88 | 0.97 | 1.08 | 1.22 | 1.51 | 1.19 | X | | | X | 09-101b |
| Emory Valley Rd | Lafayette Ave - Melton Lake Rd | A4 | 15,600 | 0.73 | 0.79 | 0.86 | 0.99 | 1.25 | 1.25 | X | X | | | 13-101 |
| Lafayette Ave | Oak Ridge Turnpike - Illinois Ave | | 32,900 | 0.56 | 0.60 | 0.64 | 0.69 | 1.33 | 1.41 | | | | | |
| Main St | I-75 - SR 61 | A5 | 13,520 | 0.71 | 0.77 | 0.85 | 0.94 | 1.24 | 1.21 | X | | | | |
| Melton Lake Rd | Oak Ridge Turnpike - Emory Valley Rd | A6 | 12,480 | 0.68 | 0.76 | 0.84 | 0.97 | 1.13 | 1.82 | X | X | | | 13-101 |
| | Emory Valley Rd - Edgemoor Rd | | 12,480 | 0.57 | 0.64 | 0.69 | 0.78 | 1.14 | 1.41 | | | | | |
| N. Illinois Ave | Oak Ridge Turnpike - W. Outer Dr | | 35,700 | 0.36 | 0.39 | 0.42 | 0.46 | 1.38 | 1.33 | | | | | |
| Oak Ridge Turnpike | Roane County Line - Illinois Ave | | 35,700 | 0.49 | 0.56 | 0.62 | 0.71 | 1.18 | 1.21 | | | | | |
| | Illinois Ave - New York Ave | | 34,500 | 0.45 | 0.48 | 0.52 | 0.56 | 1.33 | 1.35 | | | | | |
| | New York Ave - Melton Lake Rd | | 34,500 | 0.67 | 0.71 | 0.76 | 0.81 | 1.23 | 1.30 | | | | | |
| | Melton Lake Rd - SR 9 | | 33,915 | 0.69 | 0.75 | 0.80 | 0.87 | 1.15 | 1.17 | | | | | |
| Rutgers Ave | Oak Ridge Turnpike - Illinois Ave | | 32,900 | 0.31 | 0.33 | 0.34 | 0.35 | 0.00 | 0.00 | | | | | |
| S. Illinois Ave | Knox County Line - Bethel Valley Rd | A7 | 61,800 | 0.57 | 0.64 | 0.70 | 0.76 | 1.07 | 2.36 | X | | | | |
| | Bethel Valley Rd - Lafayette Ave | | 53,500 | 0.58 | 0.65 | 0.70 | 0.75 | 1.15 | 1.42 | | | | | |
| | Lafayette Ave - Oak Ridge Turnpike | A8 | 34,500 | 0.80 | 0.89 | 0.96 | 1.06 | 1.32 | 1.38 | X | X | | | 13-802 |
| Scarboro Rd | Illinois Ave - Bethel Valley Rd | | 15,600 | 0.57 | 0.62 | 0.69 | 0.79 | 1.21 | 1.28 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SR 61 | Melton Lake Rd - SR 9 | | 33,915 | 0.53 | 0.58 | 0.62 | 0.69 | 1.15 | 1.17 | | | | | |
| | SR 62 - Oak Ridge Turnpike | | 13,520 | 0.36 | 0.40 | 0.44 | 0.52 | 1.13 | 1.13 | | | | | |
| | I-75 - Norris Fwy | | 35,700 | 0.44 | 0.55 | 0.75 | 0.96 | 1.39 | 1.27 | | | | | |
| Tri-County Blvd | W. Outer Dr - Roane County Line | | 35,700 | 0.51 | 0.59 | 0.65 | 0.74 | 1.26 | 1.21 | | | | | |
| US 25 W | Knox County Line - Edgemoor Rd | | 26,775 | 0.58 | 0.64 | 0.71 | 0.82 | 1.18 | 1.18 | | | | | |
| | I-75 - SR 61 | | 13,520 | 0.57 | 0.60 | 0.63 | 0.68 | 1.24 | 1.21 | | | | | |
| **Blount County** | | | | | | | | | | | | | | |
| Alcoa Hwy | Hunt Rd - I-140 | B1 | 61,800 | 0.84 | 0.91 | 0.96 | 1.02 | 1.10 | 1.18 | X | | | X | 09-218, 09-257 |
| | Singleton Station Rd - C.L. | B2 | 61,800 | 0.73 | 0.80 | 0.85 | 0.94 | 1.16 | 1.15 | X | | | X | 09-216 |
| | Pellissippi Pkwy - Singleton Station Rd | B3 | 61,800 | 0.76 | 0.83 | 0.89 | 0.99 | 1.08 | 1.11 | X | | | X | 09-258 |
| Bessemer St | US 129 - Hall Rd | B4 | 15,600 | 0.86 | 1.05 | 1.20 | 1.30 | 1.46 | 1.50 | X | | | X | 13-205 |
| | Hall Rd - Springbook Rd | | 12,480 | 0.38 | 0.45 | 0.51 | 0.58 | 1.31 | 1.31 | | | | | |
| Blockhouse Rd | Montvale Rd - Wilkinson Pk | | 12,480 | 0.06 | 0.06 | 0.07 | 0.09 | 0.00 | 0.00 | | | | | |
| Brick Mill Rd | U.S. 129 - U.S. 411 | | 12,480 | 0.09 | 0.10 | 0.12 | 0.20 | 1.34 | 1.24 | | | | | |
| Broadway Ave | US 129 - Lamar Alexander Pkwy | B5 | 13,520 | 1.28 | 1.35 | 1.45 | 1.57 | 1.48 | 1.43 | X | X | | X | 09-242 |
| | Lamar Alexander Pkwy - Cusick St | B6 | 13,520 | 0.75 | 0.81 | 0.88 | 0.96 | 1.60 | 1.58 | X | X | | | 13-808 |
| Brown Sch Rd | Sevierville Rd - Old Knoxville Hwy | | 12,480 | 0.32 | 0.39 | 0.54 | 0.66 | 0.00 | 0.00 | | | | | |
| Burnett Sta Rd | Chapman Hwy - Sevierville Rd | | 12,480 | 0.28 | 0.31 | 0.37 | 0.49 | 0.00 | 0.00 | | | | | |
| Calderwood Hwy | Monroe County Line - U.S. 411 S | | 13,520 | 0.41 | 0.50 | 0.57 | 0.87 | 1.20 | 1.16 | | | | | |
| Calderwood St | US Hwy 411 - Alcoa Hwy | B7 | 24,675 | 0.71 | 0.79 | 0.83 | 0.87 | 1.49 | 1.57 | X | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carpenter Grd Rd | Mint Rd - Raulston Rd | | 12,480 | 0.30 | 0.35 | 0.43 | 0.53 | 0.00 | 0.00 | | | | | |
| | Raulston Rd - Sandy Springs Rd | B8 | 12,480 | 0.86 | 1.04 | 1.24 | 1.43 | 0.00 | 0.00 | X | X | | | 09-223 |
| Chapman Hwy | Boyds Creek Hwy - Knox County Line | B9 | 35,700 | 0.64 | 0.70 | 0.80 | 1.03 | 1.27 | 1.36 | X | | | | |
| Court St | Memorial Dr - U.S. 321 | | 12,480 | 0.49 | 0.53 | 0.57 | 0.62 | 0.00 | 0.00 | | | | | |
| Cusick Rd | Singleton Sta. Rd - U.S. 129 | B10 | 12,480 | 0.31 | 0.39 | 0.53 | 0.74 | 1.53 | 1.52 | X | | | | |
| Cusick St | US Hwy 411 - Alcoa Hwy | | 24,675 | 0.34 | 0.38 | 0.40 | 0.42 | 1.49 | 1.57 | | | | | |
| Dogwood Dr | Sevierville Rd - Lamar Alexander Pkwy | | 12,480 | 0.09 | 0.11 | 0.14 | 0.20 | 0.00 | 0.00 | | | | | |
| Everett High Rd | Sevierville Rd - Lincoln Rd | | 12,480 | 0.30 | 0.36 | 0.40 | 0.45 | 1.89 | 1.22 | | | | | |
| Foch St | U.S. 321 - U.S. 129 | | 12,480 | 0.34 | 0.34 | 0.37 | 0.37 | 0.00 | 0.00 | | | | | |
| Foothills Mall Dr | Alcoa Hwy - US 411 | | 32,900 | 0.45 | 0.57 | 0.67 | 0.79 | 1.41 | 1.47 | | | | | |
| | U.S. 321 - U.S. 129 | B11 | 32,900 | 0.49 | 0.54 | 0.64 | 0.73 | 1.56 | 1.71 | X | | | | |
| Hall Rd | Alcoa Hwy - Lincoln St | B12 | 32,900 | 0.76 | 0.83 | 0.92 | 0.98 | 1.21 | 1.35 | X | | | X | 09-232 |
| Hunt Rd | Louisville Rd - Alcoa Hwy | | 15,600 | 0.51 | 0.61 | 0.71 | 0.83 | 1.28 | 1.35 | | | | | |
| | Alcoa Hwy - SR 33 | | 15,600 | 0.55 | 0.68 | 0.82 | 0.95 | 1.32 | 1.29 | | | | | |
| | U.S. 321 - Topside Rd | | 12,480 | 0.35 | 0.42 | 0.48 | 0.56 | 1.23 | 1.36 | | | | | |
| I-140 | C.L. - U.S. 129 | | 76,500 | 0.53 | 0.62 | 0.71 | 0.80 | 1.10 | 1.10 | | | | | |
| Lamar Alexdr Pky | Tuckaleechee Pk - Washington St | | 35,700 | 0.59 | 0.66 | 0.79 | 0.91 | 1.19 | 1.19 | | | | | |
| | William Blount Dr - Alcoa Hwy | B13 | 35,700 | 0.67 | 0.73 | 0.79 | 0.88 | 1.38 | 1.38 | X | X | | | 13-808 |
| | Alcoa Hwy - Broadway Ave | B14 | 34,500 | 0.66 | 0.73 | 0.78 | 0.85 | 1.38 | 1.52 | X | X | | | 13-808 |
| | Broadway Ave - Washington St | B15 | 34,500 | 0.65 | 0.70 | 0.75 | 0.81 | 1.51 | 1.52 | X | X | | | 13-808 |
| | Loudon County Line - Wm Blount Dr | | 35,700 | 0.33 | 0.38 | 0.42 | 0.47 | 1.11 | 1.10 | | | | | |
| | Tuckaleechee Pk - SR 337 | | 35,700 | 0.33 | 0.37 | 0.41 | 0.47 | 1.10 | 1.08 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lincoln Rd | Hall Rd - Old Knoxville Hwy | B16 | 12,480 | 0.61 | 0.74 | 0.90 | 1.10 | 1.53 | 1.54 | X | | | | |
| Louisville Rd | Alcoa Hwy - Topside Rd | B17 | 13,520 | 0.67 | 0.85 | 0.95 | 1.07 | 1.26 | 1.28 | X | X | | | 13-205 |
| | U.S. 321 - Topside Rd | | 13,520 | 0.49 | 0.65 | 0.75 | 0.87 | 1.15 | 1.14 | | | | | |
| McArthur Rd | Springbrook Rd - Old Knoxville Hwy | | 12,480 | 0.18 | 0.26 | 0.35 | 0.45 | 1.36 | 1.34 | | | | | |
| Mentor Rd | Wright Ferry Rd - Louisville Rd | | 12,480 | 0.16 | 0.20 | 0.30 | 0.42 | 0.00 | 0.00 | | | | | |
| Merritt Rd | Sevierville Rd - Lamar Alexander Pkwy | | 12,480 | 0.12 | 0.13 | 0.15 | 0.20 | 0.00 | 0.00 | | | | | |
| Middlesettlement | U.S. 129 - Old Glory Rd | | 35,700 | 0.35 | 0.46 | 0.59 | 0.77 | 0.00 | 0.00 | | | | | |
| Mint Rd | Carpenters Grade Rd - Old Niles Ferry Rd | | 12,480 | 0.22 | 0.24 | 0.26 | 0.30 | 0.00 | 0.00 | | | | | |
| Miser Sta Rd | Quarry Rd - Louisville Rd | | 12,480 | 0.09 | 0.11 | 0.13 | 0.17 | 0.00 | 0.00 | | | | | |
| Montvale Rd | Southview Dr - Boardman Ave | | 13,520 | 0.31 | 0.33 | 0.35 | 0.38 | 1.20 | 1.17 | | | | | |
| | Boardman Ave - Lamar Alex Pkwy | B18 | 13,520 | 0.92 | 0.98 | 1.03 | 1.12 | 1.51 | 1.45 | X | X | | | 09-262 |
| | Six Mile Rd - Southview Dr | | 13,520 | 0.33 | 0.35 | 0.38 | 0.42 | 1.27 | 1.15 | | | | | |
| Montvale Sta Rd | Carpenter Grd Rd - Montvale Rd | B19 | 12,480 | 0.61 | 0.72 | 0.82 | 0.94 | 1.37 | 1.30 | X | | | | |
| Morganton Rd | Foothills Mall Rd - Wm Blount Dr | B20 | 12,480 | 0.72 | 0.82 | 0.91 | 0.99 | 1.22 | 1.21 | X | X | | | 09-211 |
| | Wm Blount Dr - Henry Ln | | 12,480 | 0.37 | 0.39 | 0.42 | 0.48 | 0.00 | 0.00 | | | | | |
| Old Knoxville Hy | Williams Mill Rd - Hunt Rd | | 13,520 | 0.46 | 0.57 | 0.69 | 0.81 | 1.39 | 1.56 | | | | | |
| | Hunt Rd - Washington St | B21 | 13,520 | 0.98 | 1.11 | 1.24 | 1.36 | 1.36 | 1.32 | X | X | | | 09-212 |
| | Sam Houston Rd - Knox County Line | B22 | 13,520 | 0.49 | 0.59 | 0.71 | 0.87 | 1.13 | 1.15 | X | X | | | 09-233 |
| Old Niles Ferry | Calderwood Hwy - Broadway Ave | B23 | 12,480 | 0.42 | 0.56 | 0.73 | 1.02 | 0.00 | 0.00 | X | X | | | 09-223 |
| Pleasant Hill Rd | Court St - Lamar Alexander Pkwy | | 12,480 | 0.04 | 0.05 | 0.07 | 0.10 | 0.00 | 0.00 | | | | | |
| Raulston Rd | Montvale Rd - Carpenter Grade Rd | | 12,480 | 0.40 | 0.50 | 0.61 | 0.76 | 0.00 | 0.00 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sandy Sprs Rd | Montvale Station Rd - U.S. 411 | B24 | 12,480 | 0.80 | 0.90 | 1.04 | 1.13 | 0.00 | 0.00 | X | X | | | 09-240 |
| Sevierville Rd | Brown School Rd - High St | B25 | 13,520 | 0.73 | 0.82 | 0.92 | 1.06 | 1.38 | 1.28 | X | X | | | 09-245 |
| | Brown School Rd - Davis Ford Rd | | 13,520 | 0.54 | 0.63 | 0.77 | 0.97 | 1.12 | 1.10 | | | | | |
| | Davis Ford Rd - Sevier County Line | | 13,520 | 0.40 | 0.44 | 0.50 | 0.58 | 1.10 | 1.09 | | | | | |
| Singleton Sta Rd | U.S. 129 - Old Knoxville Hwy | | 12,480 | 0.34 | 0.36 | 0.42 | 0.54 | 1.35 | 1.31 | | | | | |
| Springbrook Rd | Hunt Rd - Wright Rd | | 12,480 | 0.14 | 0.19 | 0.26 | 0.32 | 0.00 | 0.00 | | | | | |
| SR 162 | Old Knoxville Hwy - U.S. 129 | | 76,500 | 0.15 | 0.18 | 0.21 | 0.26 | 1.10 | 1.10 | | | | | |
| Topside Rd | Alcoa Hwy - I-140 | B26 | 13,520 | 0.98 | 1.14 | 1.31 | 1.53 | 1.33 | 1.33 | X | X | | | 09-248 |
| | I-140 - Louisville Rd | B27 | 13,520 | 0.73 | 0.89 | 1.01 | 1.21 | 1.20 | 1.24 | X | | | | |
| Tuckaleechee Pk | U.S. 321 W - U.S. 321 E | | 12,480 | 0.33 | 0.37 | 0.38 | 0.48 | 0.00 | 0.00 | | | | | |
| US 129 Bypass | US 411 - Louisville Rd | B28 | 34,500 | 1.02 | 1.21 | 1.32 | 1.44 | 1.47 | 1.38 | X | | | X | 17-202 |
| | Louisville Rd - Hunt Rd | B29 | 35,700 | 1.05 | 1.21 | 1.33 | 1.46 | 1.16 | 1.56 | X | | | X | 17-202, 17-203, 17-204 |
| US 411 | William Blount Dr - US 129 | B30 | 35,700 | 1.00 | 1.20 | 1.32 | 1.49 | 1.33 | 1.38 | X | X | | | 13-808 |
| | Loudon County Line - Wm Blount Dr | B31 | 35,700 | 0.55 | 0.74 | 0.86 | 1.01 | 1.13 | 1.12 | X | | | | |
| Washington St | Lincoln St - US 321 | B32 | 32,900 | 0.70 | 0.73 | 0.78 | 0.82 | 1.39 | 1.54 | X | | | X | 09-232 |
| Wildwood Rd | Old Knoxville Hwy - Nails Creek Rd | | 12,480 | 0.23 | 0.29 | 0.43 | 0.64 | 0.00 | 0.00 | | | | | |
| Wilkinson Pk | Blockhouse Rd - Court St | | 12,480 | 0.37 | 0.39 | 0.43 | 0.48 | 0.00 | 0.00 | | | | | |
| William Blount Dr | U.S. 321 - U.S. 411 South | B33 | 12,480 | 0.64 | 0.75 | 0.87 | 1.03 | 1.36 | 1.37 | X | | | | |
| Wright Rd | U.S. 129 - Hunt Rd | | 12,480 | 0.46 | 0.52 | 0.58 | 0.71 | 1.44 | 1.55 | | | | | |
| | Hunt Rd - Lincoln Rd | | 12,480 | 0.27 | 0.34 | 0.44 | 0.57 | 1.27 | 1.23 | | | | | |
| Wrights Ferry Rd | U.S. 129 - Topside Rd | | 12,480 | 0.25 | 0.28 | 0.30 | 0.34 | 0.00 | 0.00 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Knox County** | | | | | | | | | | | | | | |
| 17th St | Melrose Av - Western Av | | 23,940 | 0.67 | 0.69 | 0.73 | 0.75 | 1.50 | 1.63 | | | | | |
| Alcoa Hwy | C.L. - Maloney Rd | K1 | 61,800 | 0.76 | 0.83 | 0.89 | 0.98 | 1.10 | 1.08 | X | | | X | 09-628 |
| | Maloney Rd - Woodson Dr | | 105,400 | 0.45 | 0.48 | 0.52 | 0.57 | 1.11 | 1.10 | | | | | |
| | Woodson Dr - Cherokee Trail | K2 | 56,100 | 0.89 | 0.97 | 1.06 | 1.16 | 1.07 | 1.08 | X | | | X | 09-653 |
| | Cherokee Tr - Kingston Pk | | 105,400 | 0.54 | 0.62 | 0.69 | 0.76 | 1.08 | 1.08 | | | | | |
| | Kingston Pk - I-40 | | 105,400 | 0.64 | 0.71 | 0.77 | 0.83 | 1.10 | 1.11 | | | | | |
| Amherst Rd | Middlebrook Pk - Ball Camp Pk | | 12,480 | 0.26 | 0.30 | 0.34 | 0.39 | 1.42 | 1.30 | | | | | |
| Andrew Johnsn Hy | C.L. - Asheville Hwy | | 35,700 | 0.48 | 0.54 | 0.64 | 0.77 | 1.34 | 1.17 | | | | | |
| Asheville Hwy | AJ Hwy - Sevier County Line | | 13,520 | 0.30 | 0.32 | 0.40 | 0.56 | 1.32 | 1.27 | | | | | |
| | John Sevier Hwy - I-40 E Ramps | K3 | 35,700 | 0.92 | 1.03 | 1.29 | 1.58 | 1.31 | 1.41 | X | X | | | |
| | Asheville Hwy -Brakebill Rd | | 35,700 | 0.65 | 0.69 | 0.74 | 0.82 | 1.10 | 1.12 | | | | | |
| | Brakebill Rd - John Sevier Hwy | | 35,700 | 0.57 | 0.64 | 0.75 | 0.90 | 1.15 | 1.19 | | | | | |
| | I-40 E Ramps - Prosser Rd | | 35,700 | 0.28 | 0.30 | 0.35 | 0.44 | 1.28 | 1.33 | | | | | |
| Atlantic Ave | Bruhin Rd - Broadway | | 12,480 | 0.27 | 0.30 | 0.32 | 0.33 | 0.00 | 0.00 | | | | | |
| Ball Camp Pk | Middlebrook Pk - Oak Ridge Hwy | K4 | 12,480 | 0.51 | 0.70 | 0.85 | 1.02 | 1.38 | 1.22 | X | | | X | 09-605 |
| Beaver Ridge Rd | Emory Rd - Oak Ridge Hwy | K5 | 12,480 | 0.56 | 0.67 | 0.78 | 0.89 | 1.71 | 1.46 | X | X | | | 09-636 |
| | Oak Ridge Hwy - Hardin Valley Rd | K6 | 12,480 | 0.95 | 1.08 | 1.18 | 1.30 | 1.41 | 1.53 | X | | | X | 09-635 |
| Blount Ave | Henley St - James White Pkwy | | 16,380 | 0.42 | 0.47 | 0.50 | 0.58 | 1.38 | 1.42 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Broadway | I-640 W Ramps - Grainger Ave | | 31,160 | 0.75 | 0.76 | 0.78 | 0.81 | 1.33 | 1.44 | | | | | |
| | Central St - Summit Hill Dr | | 24,600 | 0.37 | 0.37 | 0.37 | 0.39 | 1.36 | 1.32 | | | | | |
| | Brown Gap Rd - Cedar Ln | K7 | 35,700 | 0.85 | 0.90 | 0.96 | 1.03 | 1.30 | 1.25 | X | X | | | 13-602 |
| | Cedar Ln - I-640 W Ramps | K8 | 32,800 | 1.26 | 1.34 | 1.42 | 1.52 | 1.75 | 1.60 | X | X | X | | 13-602 |
| | Grainger Ave - Central St | | 16,300 | 0.54 | 0.54 | 0.55 | 0.58 | 1.40 | 1.40 | | | | | |
| Callahan Dr | Central Ave Pk - Pleasant Ridge Rd | K9 | 32,900 | 0.74 | 0.85 | 1.02 | 1.15 | 1.35 | 1.45 | X | | | | |
| Campbell Sta Rd | I-40 W Ramps - Hardin Valley Rd | K10 | 12,480 | 0.42 | 0.74 | 0.92 | 1.02 | 1.23 | 1.25 | X | | | | |
| | Kingston Pk - Parkside Dr | K11 | 34,500 | 0.69 | 0.86 | 0.94 | 1.03 | 1.42 | 1.41 | X | X | | | 13-813 |
| | Parkside Dr - I-40 | K12 | 32,900 | 0.99 | 1.16 | 1.24 | 1.29 | 1.56 | 1.56 | X | X | | | 13-813 |
| Cedar Bluff Rd | Middlebrook Pk - Dutchtown Rd | K13 | 32,900 | 0.66 | 0.73 | 0.80 | 0.87 | 1.50 | 1.40 | X | X | | | 13-816 |
| | Dutchtown Rd - Kingston Pk | K14 | 32,900 | 0.65 | 0.69 | 0.73 | 0.77 | 1.61 | 1.66 | X | X | | | 09-624 |
| Cedar Ln | Central Ave Pk - Broadway | K15 | 12,480 | 1.13 | 1.17 | 1.24 | 1.31 | 1.32 | 1.36 | X | | | | |
| Central Ave Pk | Emory Rd - Bruhin Rd | K16 | 12,480 | 0.59 | 0.67 | 0.82 | 0.98 | 1.37 | 1.43 | X | | | | |
| Central St | Bruhin Rd - Woodland Ave | | 16,380 | 0.48 | 0.48 | 0.50 | 0.53 | 1.32 | 1.30 | | | | | |
| | Woodland Ave - Fifth Ave | | 24,675 | 0.32 | 0.32 | 0.32 | 0.35 | 1.37 | 1.39 | | | | | |
| | Fifth Ave - Summit Hill Dr | | 15,600 | 0.43 | 0.43 | 0.45 | 0.50 | 1.36 | 1.46 | | | | | |
| Chapman Hwy | C.L. to John Sevier Hwy | K17 | 26,775 | 0.96 | 1.04 | 1.17 | 1.37 | 1.18 | 1.24 | X | X | | | 09-626 |
| | John Sevier Hwy - Lindy Dr | K18 | 35,700 | 0.80 | 0.84 | 0.91 | 1.02 | 1.17 | 1.38 | X | X | X | | 09-626a |
| | Lindy Dr - Stone Rd | K19 | 26,775 | 1.03 | 1.08 | 1.16 | 1.29 | 1.21 | 1.22 | X | X | X | | 09-626a |
| | Stone Rd - Blount Ave | K20 | 32,800 | 0.87 | 0.90 | 0.94 | 1.01 | 1.30 | 1.39 | X | X | X | | 09-626a |
| Cherry St | Cecil Ave - I-40 W Ramps | | 26,775 | 0.34 | 0.36 | 0.37 | 0.39 | 1.50 | 1.45 | | | | | |
| | I-40 W Ramps - Magnolia Ave | | 32,800 | 0.44 | 0.45 | 0.45 | 0.46 | 1.43 | 1.50 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Choto Rd | Boyd Station Rd - Northshore Dr | | 12,480 | 0.30 | 0.46 | 0.56 | 0.62 | 0.00 | 0.00 | | | | | |
| Clinton Hwy | C.L. - Emory Rd | | 35,700 | 0.46 | 0.50 | 0.56 | 0.64 | 1.34 | 1.34 | | | | | |
| | Emory Rd - Callahan Dr | K21 | 35,700 | 0.76 | 0.81 | 0.90 | 1.02 | 1.42 | 1.40 | X | X | | | 17-801 |
| | Callahan Dr - Merchant Dr | K22 | 35,700 | 0.73 | 0.79 | 0.87 | 0.97 | 1.27 | 1.48 | X | X | X | | 17-801 |
| | Merchant Dr - I-275/I-640 | K23 | 34,500 | 0.75 | 0.80 | 0.88 | 0.98 | 1.41 | 1.47 | X | X | X | | 17-801 |
| Concord Rd | Turkey Creek Rd - Northshore Dr | | 32,800 | 0.34 | 0.46 | 0.51 | 0.56 | 1.37 | 1.37 | | | | | |
| Concord St | Sutherland Ave - Kingston Pk | | 24,675 | 0.19 | 0.21 | 0.22 | 0.25 | 0.00 | 0.00 | | | | | |
| Cumberland Ave | Alcoa Hwy Ramps - Volunteer Blvd | K24 | 31,160 | 1.15 | 1.19 | 1.23 | 1.25 | 1.59 | 1.68 | X | X | X | | 17-801 |
| | Volunteer Blvd - 17th St | | 24,600 | 0.78 | 0.77 | 0.79 | 0.80 | 1.44 | 1.72 | | | | | |
| | 17th St - 11th St | | 31,160 | 0.49 | 0.49 | 0.51 | 0.53 | 1.50 | 1.62 | | | | | |
| | 11th St - Henley St | | 31,160 | 0.37 | 0.37 | 0.39 | 0.43 | 1.51 | 1.61 | | | | | |
| Dutchtown Rd | Pellissippi Pkwy - Cedar Bluff Rd | | 16,380 | 0.55 | 0.60 | 0.70 | 0.79 | 1.27 | 1.28 | | | | | |
| Ebenezer Rd | Northshore Dr - S. Peters Rd | | 32,900 | 0.44 | 0.51 | 0.56 | 0.61 | 1.47 | 1.29 | | | | | |
| Ed Shouse Dr | Western Ave - Middlebrook Pk | | 32,900 | 0.73 | 0.75 | 0.78 | 0.83 | 1.33 | 1.52 | | | | | |
| Emory Rd | Tazewell Pk - Grainger County Line | | 13,520 | 0.21 | 0.24 | 0.30 | 0.39 | 1.25 | 1.18 | | | | | |
| | Tazewell Pk - Maynardville Pk | K25 | 13,520 | 0.77 | 0.95 | 1.12 | 1.25 | 1.26 | 1.27 | X | | | X | 09-643 |
| | Maynardville Pk - Norris Fwy | K26 | 13,520 | 0.64 | 0.78 | 0.91 | 1.01 | 1.56 | 1.53 | X | | | | |
| | Norris Fwy - Dry Gap Pk | | 35,700 | 0.43 | 0.51 | 0.60 | 0.69 | 1.19 | 1.27 | | | | | |
| | Dry Gap Pk - I-75N Ramps | K27 | 34,500 | 0.65 | 0.77 | 0.87 | 0.99 | 1.68 | 1.38 | X | | | | |
| | Beaver Ridge Rd - Clinton Hwy | K28 | 13,520 | 0.66 | 0.80 | 0.96 | 1.13 | 1.16 | 1.16 | X | X | | | 09-636 |
| | Clinton Hwy - Gill Rd | | 35,700 | 0.34 | 0.37 | 0.41 | 0.47 | 0.00 | 0.00 | | | | | |
| | Gill Rd - I-75 N Ramps | K29 | 34,500 | 0.44 | 0.55 | 0.67 | 0.80 | 1.52 | 1.58 | X | X | | | 09-652 |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Everett Rd | Yarnell Rd - Kingston Pk | | 12,480 | 0.16 | 0.27 | 0.35 | 0.46 | 0.00 | 0.00 | | | | | |
| Francis Rd | Middlebrook Pk - Amherst Rd | | 12,480 | 0.66 | 0.70 | 0.75 | 0.80 | 1.29 | 1.26 | | | | | |
| Gallaher View Rd | Gleason Dr - Kingston Pk | K30 | 12,480 | 0.92 | 1.00 | 1.05 | 1.17 | 1.30 | 1.40 | X | | | | |
| | I-40 E Ramps - Middlebrook Pk | | 32,900 | 0.48 | 0.51 | 0.55 | 0.60 | 1.41 | 1.43 | | | | | |
| Gleason Dr | Morrell Rd - Montvue Rd | | 32,900 | 0.06 | 0.08 | 0.09 | 0.11 | 0.00 | 0.00 | | | | | |
| | Montvue Rd - Ebenezer Rd | | 12,480 | 0.69 | 0.77 | 0.81 | 0.86 | 0.00 | 0.00 | | | | | |
| Grgsby Chapel Rd | Smith Rd - Campbell Station Rd | K31 | 16,380 | 0.95 | 1.23 | 1.45 | 1.58 | 1.34 | 1.34 | X | X | | | |
| Hardin Valley Rd | Campbell Station Rd - Bryant Ln | K32 | 16,380 | 0.41 | 0.72 | 0.91 | 1.06 | 1.37 | 1.36 | X | X | | | |
| | Buttermilk Rd - Campbell Station Rd | | 12,480 | 0.35 | 0.63 | 0.83 | 1.02 | 1.13 | 1.15 | | | | | |
| | Bryant Ln - Pellissippi SB Ramps | K33 | 16,380 | 1.06 | 1.50 | 1.76 | 1.98 | 1.32 | 1.25 | X | X | | X | 09-634 |
| | Pellissippi SB Ramps - Middlebrook Pk | K34 | 32,900 | 0.68 | 1.01 | 1.25 | 1.41 | 1.45 | 1.45 | X | | | | |
| Henley St | Summit Hill Dr - Blount Ave | K35 | 49,300 | 0.81 | 0.82 | 0.85 | 0.90 | 1.53 | 1.63 | X | X | | | 13-602 |
| I-140 | Dutchtown Rd - I-40 | K36 | 76,500 | 0.95 | 1.14 | 1.26 | 1.38 | 1.35 | 1.17 | X | | | X | 09-623 |
| | C.L. - Westland Dr | | 76,500 | 0.59 | 0.70 | 0.80 | 0.90 | 1.14 | 1.10 | | | | | |
| | Westland Dr - I-40 | K37 | 76,500 | 0.75 | 0.92 | 1.03 | 1.12 | 1.55 | 1.11 | X | | | | |
| I-275 | I-640 - I-40 | | 115,300 | 0.49 | 0.51 | 0.54 | 0.57 | 1.14 | 1.17 | | | | | |
| I-40 | Alcoa Hwy - James White Pkwy | K38 | 135,300 | 0.93 | 1.01 | 1.08 | 1.16 | 1.59 | 1.84 | X | | | | |
| | Knox County Line - Jefferson County Line | K39 | 76,500 | 0.84 | 0.96 | 1.09 | 1.25 | 1.07 | 1.08 | X | | | | |
| | Midway Rd - I-640 | | 120,200 | 0.59 | 0.67 | 0.76 | 0.87 | 1.07 | 1.07 | | | | | |
| | I-640 - James White Pkwy | | 115,300 | 0.67 | 0.74 | 0.82 | 0.91 | 1.19 | 1.09 | | | | | |
| | I-640 - Alcoa Hwy | K40 | 156,000 | 0.84 | 0.91 | 0.96 | 1.02 | 1.28 | 1.83 | X | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I-40/I-75 | Loudon County Line - Lovell Rd | K41 | 120,200 | 0.80 | 0.91 | 0.96 | 1.00 | 1.13 | 1.17 | X | | | X | 13-603, 09-691 |
| | Lovell Rd - I-140 | K42 | 156,000 | 0.78 | 0.88 | 0.93 | 0.97 | 1.13 | 1.91 | X | | | | |
| | I-640 Ramps | K43 | 120,200 | 1.00 | 1.06 | 1.12 | 1.18 | 1.73 | 1.36 | X | | | | |
| | I-640 - Papermill Dr | K44 | 176,000 | 1.04 | 1.11 | 1.17 | 1.23 | 1.13 | 1.16 | X | | | | |
| | Papermill Dr - West Hills | K45 | 176,000 | 1.02 | 1.10 | 1.15 | 1.20 | 1.14 | 1.30 | X | | | | |
| | West Hills - Gallaher View Rd | K46 | 176,000 | 1.01 | 1.10 | 1.16 | 1.22 | 1.09 | 1.18 | X | | | | |
| | Gallaher View Rd - Cedar Bluff Rd | K47 | 176,000 | 0.97 | 1.06 | 1.12 | 1.19 | 1.15 | 1.56 | X | | | | |
| | Cedar Bluff Rd - Pellissippi Pkwy | K48 | 176,000 | 0.92 | 1.03 | 1.09 | 1.15 | 1.10 | 2.33 | X | | | | |
| I-640 | I-275 - I-40E | | 120,200 | 0.63 | 0.69 | 0.77 | 0.87 | 1.09 | 1.12 | | | | | |
| | I-40W - I-275 | K49 | 120,200 | 0.65 | 0.69 | 0.75 | 0.81 | 1.71 | 1.74 | X | | | | |
| I-75 | Emory Rd - I-640 | | 120,200 | 0.63 | 0.69 | 0.75 | 0.82 | 1.26 | 1.13 | | | | | |
| | Anderson County Line - Emory Rd | K50 | 74,600 | 0.64 | 0.71 | 0.77 | 0.85 | 1.08 | 1.09 | X | | | X | 09-692 |
| Inskip Rd | Clinton Hwy - Cedar Ln | | 12,480 | 0.42 | 0.44 | 0.47 | 0.56 | 1.27 | 1.28 | | | | | |
| James White Pkwy | I-40 - Hill Ave | | 70,200 | 0.65 | 0.69 | 0.75 | 0.82 | 1.15 | 1.11 | | | | | |
| | Hill Ave - Sevierville Pk | | 70,200 | 0.06 | 0.07 | 0.08 | 0.10 | 1.15 | 1.12 | | | | | |
| John Sevier Hwy | Asheville Hwy - National Dr | K51 | 17,745 | 0.65 | 0.70 | 0.88 | 1.10 | 1.20 | 1.21 | X | | | | |
| | National Dr - Chapman Hwy | | 17,745 | 0.56 | 0.61 | 0.74 | 0.90 | 1.15 | 1.17 | | | | | |
| | Chapman Hwy - Martin Mill Pk | K52 | 17,745 | 0.81 | 0.89 | 1.00 | 1.14 | 1.16 | 1.14 | X | | | X | 09-644 |
| | Martin Mill Pk - Alcoa Hwy | K53 | 17,745 | 1.05 | 1.14 | 1.28 | 1.46 | 1.30 | 1.53 | X | | | X | 09-644 |
| Keith Ave | Liberty St - I-275 | | 12,480 | 0.21 | 0.21 | 0.25 | 0.27 | 1.35 | 1.28 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kingston Pk | Loudon County Line - Jamestowne Blvd | K54 | 35,700 | 0.63 | 0.87 | 1.00 | 1.19 | 1.22 | 1.27 | X | X | | | 13-813 |
| | Jamestowne Blvd - Lovell Rd | K55 | 34,500 | 0.83 | 1.02 | 1.11 | 1.23 | 1.33 | 1.37 | X | X | | X | 09-668 |
| | Lovell Rd - Mabry Hood Rd | K56 | 34,500 | 0.71 | 0.80 | 0.83 | 0.88 | 1.46 | 1.70 | X | X | | | 13-602 |
| | Mabry Hood Rd - Cedar Bluff Rd | K57 | 32,800 | 0.83 | 0.93 | 0.96 | 0.99 | 1.38 | 1.57 | X | X | | | 13-602 |
| | Cedar Bluff Rd - Gallaher View Rd | K58 | 32,800 | 0.77 | 0.81 | 0.85 | 0.91 | 1.41 | 1.50 | X | X | X | | 13-602 |
| | Gallaher View Rd - Morrell Rd | K59 | 32,800 | 0.75 | 0.78 | 0.82 | 0.87 | 1.43 | 1.59 | X | X | X | | 13-602 |
| | Morrell Rd - Papermill Rd | K60 | 32,800 | 0.81 | 0.84 | 0.88 | 0.95 | 1.38 | 1.39 | X | X | X | | 13-602 |
| | Papermill Rd - Northshore Dr | | 34,500 | 0.66 | 0.67 | 0.71 | 0.76 | 1.43 | 1.48 | | | | | |
| | Northshore Dr - Lyons View Pk | | 32,800 | 0.60 | 0.60 | 0.62 | 0.64 | 1.42 | 1.67 | | | | | |
| | Lyons View Pk - Alcoa Hwy N Ramps | K61 | 24,600 | 1.08 | 1.12 | 1.16 | 1.20 | 1.36 | 1.44 | X | X | X | | 13-602 |
| Liberty St | Sutherland Ave - Keith Ave | | 24,675 | 0.37 | 0.37 | 0.41 | 0.44 | 1.55 | 1.52 | | | | | |
| Lovell Rd | Kingston Pk - I-40 E Ramps | K62 | 34,500 | 1.20 | 1.38 | 1.46 | 1.56 | 1.63 | 1.63 | X | X | | | 17-801 |
| | I-40 E Ramps - Gilbert Dr | K63 | 34,500 | 0.98 | 1.13 | 1.22 | 1.29 | 1.58 | 1.79 | X | X | | | 17-801 |
| | Gilbert Dr - Pellissippi Pkwy | | 35,700 | 0.52 | 0.64 | 0.72 | 0.79 | 1.29 | 1.36 | | | | | |
| | Pellissippi Pkwy - Middlebrook Pk | K64 | 13,520 | 0.91 | 1.09 | 1.18 | 1.29 | 1.27 | 1.46 | X | | | X | 09-637 |
| Lyons View Pk | Northshore Dr - Kingston Pk | K65 | 12,480 | 0.92 | 1.00 | 1.07 | 1.15 | 1.26 | 1.46 | X | | | | |
| Magnolia Ave | Prosser Rd - Cherry St | | 34,500 | 0.34 | 0.35 | 0.40 | 0.55 | 1.30 | 1.32 | | | | | |
| | Cherry St - Broadway | | 34,500 | 0.31 | 0.31 | 0.35 | 0.44 | 1.34 | 1.36 | | | | | |
| Main St | 11th St - Henley St | | 31,160 | 0.43 | 0.43 | 0.45 | 0.47 | 1.51 | 1.61 | | | | | |
| Martin Mill Pk | John Sevier Hwy - Ogle Ave | | 12,480 | 0.20 | 0.22 | 0.25 | 0.30 | 1.26 | 1.20 | | | | | |
| Maryville Pk | Blount County Line - Chapman Hwy | | 13,520 | 0.33 | 0.37 | 0.43 | 0.54 | 1.28 | 1.25 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maynardville Hwy | C.L. - Emory Rd | | 35,700 | 0.38 | 0.43 | 0.49 | 0.57 | 1.16 | 1.14 | | | | | |
| | Emory Rd - Brown Gap Rd | K66 | 34,500 | 1.10 | 1.21 | 1.32 | 1.44 | 1.26 | 1.45 | X | | | | |
| McFee Rd | Kingston Pk - Boyd Station Rd | | 16,380 | 0.15 | 0.24 | 0.30 | 0.35 | 0.00 | 0.00 | | | | | |
| Merchant Dr | Pleasant Ridge Rd - Clinton Hwy | | 16,380 | 0.62 | 0.68 | 0.79 | 0.92 | 1.38 | 1.37 | | | | | |
| | Clinton Hwy - Central Ave Pk | K67 | 32,900 | 0.69 | 0.72 | 0.79 | 0.85 | 1.61 | 1.53 | X | | | | |
| Middlebrook Pk | Vanosdale Rd - Weisgarber Rd | | 35,700 | 0.60 | 0.65 | 0.68 | 0.76 | 1.32 | 1.43 | | | | | |
| | Weisgarber Rd - Ed Shouse Rd | | 34,500 | 0.73 | 0.77 | 0.81 | 0.89 | 1.36 | 1.51 | | | | | |
| | Ed Shouse Rd - Libery St | | 35,700 | 0.39 | 0.41 | 0.43 | 0.47 | 1.30 | 1.38 | | | | | |
| | Liberty St - Western Ave | | 35,700 | 0.42 | 0.43 | 0.45 | 0.49 | 1.32 | 1.37 | | | | | |
| | Hardin Valley Rd - Cedar Bluff Rd | | 35,700 | 0.43 | 0.53 | 0.60 | 0.67 | 1.30 | 1.32 | | | | | |
| | Cedar Bluff Rd - Gallaher View Rd | | 35,700 | 0.47 | 0.54 | 0.61 | 0.69 | 1.33 | 1.36 | | | | | |
| | Gallaher View Rd - Vanosdale Rd | | 34,500 | 0.64 | 0.70 | 0.77 | 0.86 | 1.30 | 1.32 | | | | | |
| Millertown Pk | Mill Rd - Roberts Rd | | 12,480 | 0.21 | 0.23 | 0.28 | 0.42 | 1.23 | 1.29 | | | | | |
| | Washington Pk - I-640 W Ramps | | 12,480 | 0.55 | 0.57 | 0.65 | 0.74 | 1.33 | 1.45 | | | | | |
| | I-640 W Ramps - Kinzel Way | | 32,900 | 0.55 | 0.61 | 0.76 | 0.95 | 1.48 | 1.63 | | | | | |
| | Kinzel Way - Mill Rd | | 12,480 | 0.53 | 0.59 | 0.81 | 1.11 | 1.24 | 1.25 | | | | | |
| Moody Ave | Chapman Hwy - James White Pkwy | | 32,900 | 0.31 | 0.31 | 0.33 | 0.39 | 1.41 | 1.45 | | | | | |
| Morrell Rd | Northshore Dr - Westland Dr | K68 | 12,480 | 1.01 | 1.11 | 1.20 | 1.30 | 1.61 | 1.83 | X | X | | | |
| | Westland Dr - Kingston Pk | | 32,900 | 0.72 | 0.76 | 0.80 | 0.86 | 1.44 | 1.49 | | | | | |
| Neyland Dr | Kingston Pk - Center Dr | | 35,700 | 0.36 | 0.39 | 0.42 | 0.47 | 1.68 | 1.62 | | | | | |
| | Center Dr - Lake Loudoun Blvd | | 35,700 | 0.45 | 0.48 | 0.51 | 0.56 | 1.40 | 1.40 | | | | | |
| | Lake Loudoun Blvd - Walnut St | | 35,700 | 0.39 | 0.40 | 0.43 | 0.46 | 1.32 | 1.42 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Norris Fwy | Maynardville Hwy - Union County Line | K69 | 13,520 | 0.64 | 0.79 | 0.98 | 1.24 | 1.21 | 1.19 | X | | | | |
| Northshore Dr | Choto Rd - Concord Rd | K70 | 12,480 | 0.91 | 1.26 | 1.35 | 1.43 | 1.14 | 1.14 | X | | | | |
| | Concord Rd - I-140 E Ramps | K71 | 13,520 | 0.96 | 1.38 | 1.54 | 1.63 | 1.24 | 1.20 | X | X | | | 09-646 |
| | I-140 E Ramps - Ebenezer Rd | | 34,500 | 0.52 | 0.63 | 0.70 | 0.76 | 1.40 | 1.51 | | | | | |
| | Ebenezer Rd - Morrell Rd | K72 | 13,520 | 1.06 | 1.20 | 1.31 | 1.42 | 1.18 | 1.23 | X | X | | | 09-645 |
| | Westland Dr - Kingston Pk | | 35,700 | 0.48 | 0.50 | 0.52 | 0.56 | 1.42 | 1.64 | | | | | |
| | Kingston Pk - Papermill Dr | K73 | 32,800 | 0.90 | 0.89 | 0.90 | 0.90 | 1.39 | 1.58 | X | X | | | |
| | Morrell Rd - Westland Dr | K74 | 13,520 | 1.13 | 1.22 | 1.30 | 1.39 | 1.28 | 1.38 | X | X | | | |
| Oak Ridge Hwy | Pellissippi Pkwy - Byington-Beaver Ridge | K75 | 13,520 | 1.15 | 1.42 | 1.71 | 2.11 | 1.14 | 1.24 | X | | | X | 09-673 |
| | Byington-Beaver Ridge - Harrell Rd | K76 | 16,900 | 0.94 | 1.11 | 1.25 | 1.41 | 1.41 | 1.25 | X | | | X | 09-638 |
| | Harrell Rd - Schaad Rd | K77 | 13,520 | 1.28 | 1.49 | 1.70 | 1.89 | 1.39 | 1.37 | X | | | X | 09-638 |
| | C.L. - Guinn Rd | K78 | 61,800 | 0.80 | 0.90 | 0.97 | 1.06 | 1.08 | 1.55 | X | X | | X | 09-647 |
| Papermill Dr | Kingston Pk - Weisgarber Rd | K79 | 12,480 | 1.18 | 1.17 | 1.19 | 1.20 | 1.39 | 1.46 | X | X | X | | 09-689 |
| | Northshore Dr - I-40 W Ramps | | 34,500 | 0.44 | 0.44 | 0.45 | 0.47 | 1.57 | 1.68 | | | | | |
| | I-40 W Ramps - Liberty St | | 12,480 | 0.69 | 0.69 | 0.74 | 0.77 | 1.30 | 1.32 | | | | | |
| Parkside Dr | Campbell Station Rd - Lovell Rd | K80 | 32,900 | 0.78 | 0.92 | 0.95 | 0.96 | 1.35 | 1.48 | X | X | | | 13-813 |
| | Lovell Rd - Mabry Hood Rd | | 32,900 | 0.40 | 0.45 | 0.48 | 0.52 | 1.34 | 1.39 | | | | | |
| Pellissippi Pkwy | Guinn Rd - Dutchtown Rd | K81 | 61,800 | 0.72 | 0.85 | 0.92 | 0.98 | 1.10 | 1.09 | X | X | | X | 09-647 |
| Peters Rd | Seven Oaks Dr - Cedar Bluff Rd | K82 | 32,900 | 0.85 | 0.88 | 0.91 | 0.94 | 1.53 | 1.66 | X | X | | | 17-801 |
| | Cedar Bluff Rd - Kingston Pk | | 32,900 | 0.45 | 0.50 | 0.52 | 0.54 | 1.49 | 1.61 | | | | | |
| | Kingston Pk - Ebenezer Rd | | 32,900 | 0.50 | 0.56 | 0.60 | 0.64 | 1.37 | 1.39 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pleasant Rdg Rd | Callhan Dr - Merchant Dr | | 16,380 | 0.70 | 0.75 | 0.82 | 0.91 | 1.30 | 1.34 | | | | | |
| | Merchant Dr - Sanderson Rd | | 16,380 | 0.66 | 0.68 | 0.74 | 0.80 | 1.27 | 1.23 | | | | | |
| | Sanderson Rd - Western Ave | | 16,380 | 0.58 | 0.59 | 0.63 | 0.67 | 1.36 | 1.43 | | | | | |
| Raccoon Valley Dr | Norris Fwy - Anderson County Line | | 13,520 | 0.28 | 0.32 | 0.39 | 0.52 | 1.22 | 1.24 | | | | | |
| Rutledge Pk | Roberts Rd - Grainger County Line | | 35,700 | 0.21 | 0.23 | 0.25 | 0.32 | 1.15 | 1.10 | | | | | |
| | Roberts Rd - Loves Creek Rd | | 35,700 | 0.35 | 0.38 | 0.46 | 0.65 | 1.20 | 1.16 | | | | | |
| | Loves Creek Rd - I-40 W Ramps | | 35,700 | 0.55 | 0.58 | 0.70 | 0.92 | 1.28 | 1.43 | | | | | |
| | I-40 W Ramps - Asheville Hwy | | 35,700 | 0.25 | 0.26 | 0.30 | 0.35 | 1.41 | 1.42 | | | | | |
| Schaad Rd | Pleasant Ridge Rd - Oak Ridge Hwy | K83 | 12,480 | 1.36 | 1.66 | 1.86 | 1.98 | 1.30 | 1.34 | X | | | X | 09-625 |
| Smith Rd | Kingston Pk - Grigsby Chapel Rd | K84 | 12,480 | 0.58 | 0.92 | 1.32 | 1.48 | 1.32 | 1.42 | X | X | | | |
| Straw Plains Pk | John Sevier Hwy - Cracker Barrel Ln | | 12,480 | 0.60 | 0.66 | 0.82 | 1.03 | 1.16 | 1.15 | | | | | |
| | Cracker Barrel Ln - Huckleberry Sprgs Rd | | 32,900 | 0.28 | 0.32 | 0.46 | 0.64 | 1.46 | 1.50 | | | | | |
| Summit Hill Dr | Broadway - Central St | | 31,700 | 0.37 | 0.38 | 0.40 | 0.43 | 1.47 | 1.57 | | | | | |
| | Central St - MLK Ave | | 31,700 | 0.32 | 0.32 | 0.33 | 0.34 | 1.48 | 1.48 | | | | | |
| Sutherland Ave | Westwood Rd - Hollywood Rd | | 16,380 | 0.35 | 0.36 | 0.37 | 0.39 | 0.00 | 0.00 | | | | | |
| | Hollywood Rd - Liberty St | | 12,480 | 0.71 | 0.73 | 0.77 | 0.83 | 0.00 | 0.00 | | | | | |
| | Liberty St - Middlebrook Pk | K85 | 12,480 | 0.82 | 0.84 | 0.89 | 0.95 | 0.00 | 0.00 | X | X | | | |
| Tazewell Pk | Emory Rd - Murphy Rd | K86 | 13,520 | 0.96 | 1.04 | 1.18 | 1.30 | 1.36 | 1.49 | X | X | | | |
| | Murphy Rd - Jacksboro Pk | K87 | 13,520 | 0.96 | 1.03 | 1.15 | 1.29 | 1.45 | 1.24 | X | X | | | |
| | Jacksboro Pk - Old Broadway | K88 | 13,520 | 1.57 | 1.60 | 1.68 | 1.80 | 1.56 | 2.07 | X | X | | | |
| Texas Ave | Western Ave - Bruhin Rd | | 12,480 | 0.60 | 0.61 | 0.63 | 0.68 | 1.34 | 1.35 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Turkey Creek Rd | Loudon County Line - Concord Rd | | 12,480 | 0.36 | 0.53 | 0.68 | 0.83 | 0.00 | 0.00 | | | | | |
| Vanosdale Rd | Kingston Pk - Middlebrook Pk | K89 | 12,480 | 1.01 | 1.04 | 1.08 | 1.14 | 1.56 | 1.56 | X | X | | | |
| Virtue Rd | Kingston Pk - Turkey Creek Rd | | 12,480 | 0.29 | 0.44 | 0.50 | 0.47 | 0.00 | 0.00 | | | | | |
| Volunteer Blvd | Cumberland Ave - Lake Loudoun Blvd | | 32,900 | 0.31 | 0.32 | 0.34 | 0.34 | 1.60 | 1.63 | | | | | |
| | Lake Loudoun Blvd - Cumberland Ave | | 32,900 | 0.25 | 0.25 | 0.26 | 0.26 | 1.44 | 1.57 | | | | | |
| Washington Pk | Murphy Rd - Maloneyville Rd | K90 | 12,480 | 0.69 | 0.75 | 1.00 | 1.29 | 1.60 | 1.14 | X | X | | | |
| | Millertown Pk - I-640 WB Ramps | | 15,600 | 0.58 | 0.63 | 0.68 | 0.74 | 1.41 | 1.41 | | | | | |
| | I-640 WB Ramps - Murphy Rd | K91 | 15,600 | 1.05 | 1.26 | 1.52 | 1.77 | 1.41 | 1.80 | X | X | | X | 09-615 |
| Watt Rd | Everett Rd - Kingston Pk | K92 | 16,380 | 0.55 | 0.83 | 1.02 | 1.09 | 1.41 | 1.48 | X | | | | |
| Weisgarber Rd | Kingston Pk - Middlebrook Pk | | 34,500 | 0.62 | 0.65 | 0.69 | 0.76 | 1.37 | 1.51 | | | | | |
| Western Ave | Schaad Rd - Palmetto Rd | | 35,700 | 0.37 | 0.50 | 0.58 | 0.64 | 1.27 | 1.27 | | | | | |
| | Palmetto Rd - Third Creek Rd | K93 | 35,700 | 0.70 | 0.85 | 0.96 | 1.06 | 0.00 | 0.00 | X | X | | | |
| | Third Creek Rd - Ed Shouse Dr | K94 | 35,700 | 0.74 | 0.87 | 0.97 | 1.06 | 0.00 | 0.00 | X | X | | | |
| | Ed Shouse Dr - Texas Ave | | 51,800 | 0.59 | 0.63 | 0.66 | 0.70 | 1.42 | 1.48 | | | | | |
| | Texas Ave - Keith Ave | | 35,700 | 0.47 | 0.49 | 0.52 | 0.56 | 1.23 | 1.26 | | | | | |
| | Keith Ave - University Ave | | 35,700 | 0.43 | 0.44 | 0.47 | 0.51 | 1.40 | 1.38 | | | | | |
| | University Ave - Broadway | | 35,700 | 0.45 | 0.46 | 0.49 | 0.52 | 1.40 | 1.57 | | | | | |
| Westland Dr | I-140 W Ramps - Ebenezer Rd | | 16,380 | 0.65 | 0.77 | 0.84 | 0.90 | 1.42 | 1.33 | | | | | |
| | Ebenezer Rd - Morrell Rd | | 12,480 | 0.70 | 0.78 | 0.84 | 0.90 | 1.23 | 1.22 | | | | | |
| | Morrell Rd - Northshore Dr | | 12,480 | 0.34 | 0.38 | 0.42 | 0.46 | 1.36 | 1.37 | | | | | |
| | Northshore Dr - I-140 W Ramps | K95 | 12,480 | 0.77 | 0.97 | 1.03 | 1.07 | 1.58 | 1.26 | X | X | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Woodland Ave | Branner St - St. Marys St | | 16,380 | 0.75 | 0.76 | 0.78 | 0.81 | 1.40 | 1.36 | | | | | |
| | St. Marys St - Broadway | | 26,775 | 0.23 | 0.22 | 0.23 | 0.24 | 1.50 | 1.44 | | | | | |
| **Loudon County** | | | | | | | | | | | | | | |
| Broadway St | Browder School Rd - US 321 | | 32,800 | 0.34 | 0.39 | 0.45 | 0.54 | 1.25 | 1.26 | | | | | |
| E. Lee Hwy | Grove St - Sugar Limb Rd | L1 | 13,520 | 0.79 | 0.95 | 1.13 | 1.34 | 1.21 | 1.21 | X | X | | | 17-802 |
| | Sugar Limb Rd - Browder School Rd | | 13,520 | 0.54 | 0.66 | 0.80 | 0.98 | 1.13 | 1.13 | | | | | |
| Ford Rd | U.S. 11 - U.S. 70 | | 12,480 | 0.07 | 0.11 | 0.16 | 0.21 | 0.00 | 0.00 | | | | | |
| Harrison Rd | Browder Hollow Rd - Old SR 95 | | 12,480 | 0.41 | 0.55 | 0.72 | 0.88 | 0.00 | 0.00 | | | | | |
| I-40 | SR 95 - I-75 | | 76,500 | 0.51 | 0.61 | 0.67 | 0.74 | 1.10 | 1.11 | | | | | |
| I-75 | Monroe County Line - SR 72 | | 76,500 | 0.55 | 0.67 | 0.73 | 0.81 | 1.07 | 1.07 | | | | | |
| | SR 72 - Sugar Limb Rd | | 76,500 | 0.62 | 0.74 | 0.81 | 0.89 | 1.07 | 1.07 | | | | | |
| | Sugar Limb Rd - US 321 | L2 | 76,500 | 0.68 | 0.81 | 0.87 | 0.95 | 1.07 | 1.06 | X | | | | |
| | US 321 - I-40 | L3 | 76,500 | 0.71 | 0.81 | 0.87 | 0.91 | 1.08 | 1.09 | X | | | | |
| Kingston St | U.S. 321 - U.S. 11 | | 12,480 | 0.46 | 0.56 | 0.69 | 0.88 | 1.33 | 1.35 | | | | | |
| Loudon Ridge Rd | Browder Hollow Rd - Old SR 95 | | 12,480 | 0.17 | 0.27 | 0.36 | 0.46 | 0.00 | 0.00 | | | | | |
| Martel Rd | Knox County Line - U.S. 11 | | 12,480 | 0.22 | 0.31 | 0.39 | 0.47 | 0.00 | 0.00 | | | | | |
| Muddy Creek Rd | U.S. 11 - U.S. 70 | | 12,480 | 0.16 | 0.24 | 0.30 | 0.35 | 0.00 | 0.00 | | | | | |
| Mulberry St | SR 72 - Grove St | | 13,520 | 0.52 | 0.61 | 0.72 | 0.88 | 1.27 | 1.29 | | | | | |
| 302 | Monroe County Line - SR 72 | | 13,520 | 0.22 | 0.26 | 0.33 | 0.43 | 1.18 | 1.14 | | | | | |
| Shaw Ferry Rd | Town Creek Rd - U.S. 11 | | 12,480 | 0.18 | 0.23 | 0.29 | 0.35 | 0.00 | 0.00 | | | | | |

| Route | Corridor Limits | Congested Corridor Map ID | Daily Traffic Capacity | 2014 V/C | 2022 V/C | 2030 V/C | 2040 V/C | AM Peak LOTTR | PM Peak LOTTR | TDM | ITS/ Operations/ Geometric | Public Transit | Added Capacity | Mobility Plan Project ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SR 72 | Roane County Line - I-75 SB Ramps | | 16,380 | 0.17 | 0.19 | 0.21 | 0.23 | 1.14 | 1.14 | | | | | |
| | I-75 SB Ramps - US 11 | | 16,380 | 0.61 | 0.70 | 0.80 | 0.90 | 1.19 | 1.23 | | | | | |
| | US 11 - Tellico Pkwy | | 13,520 | 0.48 | 0.58 | 0.68 | 0.80 | 1.13 | 1.11 | | | | | |
| Sugar Limb Rd | I-75 - U.S. 11 | | 12,480 | 0.44 | 0.50 | 0.59 | 0.69 | 1.18 | 1.23 | | | | | |
| Tellico Pkwy | SR 72 - U.S. 321 | | 16,900 | 0.44 | 0.47 | 0.50 | 0.54 | 1.10 | 1.11 | | | | | |
| Town Creek Rd | Old SR 95 - Ford Rd | | 12,480 | 0.14 | 0.17 | 0.21 | 0.25 | 1.46 | 1.47 | | | | | |
| US 11 | US 321 - Kingston Pk | L4 | 13,520 | 0.66 | 0.78 | 0.91 | 1.07 | 1.21 | 1.18 | X | X | | | 09-416 |
| US 321 | US 11 - I-75 NB Ramps | L5 | 34,500 | 0.73 | 0.80 | 0.87 | 0.94 | 1.36 | 1.46 | X | X | | X | 09-423 |
| | I-75 NB Ramps - I-75 SB Ramps | L6 | 34,500 | 0.73 | 0.84 | 0.98 | 1.11 | 1.59 | 1.57 | X | X | | | 17-802 |
| | I-75 SB Ramps - US 70 | | 35,700 | 0.41 | 0.48 | 0.62 | 0.75 | 1.39 | 1.37 | | | | | |
| | Blount County Line - Tellico Pkwy | | 35,700 | 0.32 | 0.37 | 0.43 | 0.50 | 1.10 | 1.10 | | | | | |
| | Tellico Pkwy - US 11 | | 35,700 | 0.60 | 0.69 | 0.78 | 0.89 | 1.17 | 1.21 | | | | | |
| | US 70 - I-40 | | 35,700 | 0.30 | 0.37 | 0.45 | 0.57 | 1.20 | 1.24 | | | | | |
| US 70 E | Roane County Line - U.S. 11 | | 13,520 | 0.35 | 0.55 | 0.73 | 0.93 | 1.22 | 1.20 | | | | | |
| **Sevier County** | | | | | | | | | | | | | | |
| Boyds Creek Hwy | Chapman Hwy - SR 66 | S1 | 13,520 | 0.77 | 0.91 | 1.05 | 1.22 | 1.21 | 1.17 | X | X | | | |
| Chapman Hwy | Dolly Parton Pkwy - Boyds Creek Hwy | | 35,700 | 0.49 | 0.56 | 0.66 | 0.81 | 1.14 | 1.16 | | | | | |
| | Boyds Creek Hwy - Knox County Line | | 35,700 | 0.54 | 0.61 | 0.70 | 0.90 | 1.27 | 1.36 | | | | | |
| Douglas Dam Rd | U.S. 25W - SR 66 | | 13,520 | 0.22 | 0.29 | 0.39 | 0.52 | 1.20 | 1.18 | | | | | |

**Table H-2:** Capacity Additions

| Plan ID # | Route | Termini | Jurisdiction | Length (miles) | Type of Improvement | Capacity Addition Justification | Additional Measures to Preserve Roadway Capacity |
|---|---|---|---|---|---|---|---|
| **Anderson County Projects** | | | | | | | |
| 09-101a | Edgemoor Rd (SR 170) | Oak Ridge Hwy (SR 62) to Melton Lake Dr | Oak Ridge/ Anderson County | 2.6 | Widen 2-lane to 5-lane with bike lanes | High V/C ratio, operations & public transit not applicable | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-101b | Edgemoor Rd (SR 170) | Melton Lake Dr to Clinton Hwy (SR 9) (US 25W) | Oak Ridge/ Anderson County | 3.6 | Widen 2-lane to 5-lane with bike lanes and a bridge | High V/C ratio, operations & public transit not applicable | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| **Blount County Projects** | | | | | | | |
| 09-202 | Robert C. Jackson Dr Extension | Middlesettlements Rd to Louisville Rd (SR 334) | Alcoa | 0.7 | New 4-lane road w/ center turn lane and/or median | Provides additional network connectivity. Project will alleviate congestion from US 129 Bypass as parallel facility | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-204 | Pellissippi Place Access Road | Connect Old Knoxville Hwy (SR 33) to Wildwood Rd through Pellissippi Place Research Park | Alcoa | 1.2 | Extend 2-lane and 4-lane road w/ center median lane | Project provides access to Pellissippi Research Park, a major economic development area and additional network connectivity. | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-216 | Alcoa Hwy (SR 115) (US 129) | Pellissippi Pkwy (SR 162) to Knox/Blount County Line | Blount County/ Alcoa | 3.2 | Widen 4-lane to 6-lane with 2 auxiliary lanes between Singleton Station Rd and Topside Rd (SR 333) | High V/C ratio, operations & public transit not applicable | Alcoa Hwy projects will include a concrete median barrier to provide partial to full access control. Project also includes a separated multi-use path for pedestrians and bicyclists that will connect several mile corridor btwn Knox & Blount. |
| 09-218 | Alcoa Hwy Bypass (SR 115) (US 129) | From Hall Rd (SR 35)/Alcoa Hwy (SR 115) Interchange to Proposed Interchange serving McGhee Tyson Airport | Alcoa | 1.3 | Construct 8-lane freeway on existing and new alignment | Project provides bypass to congested Alcoa Hwy "Airport motor mile" section | Full access control facility |
| 09-220 | Home Ave Extension | Home Ave to Calderwood St | Alcoa/ Maryville | 0.2 | Extend 3-lane Home Ave through existing shopping center to line up with Lindsay St at Calderwood St | Project provides additional network connectivity | Provide accommodations for bike/ped |
| 09-232 | Pellissippi Pkwy (SR 162) | Old Knoxville Hwy (SR 33) to Lamar Alexander Pkwy (SR 73) (US 321) | Blount County | 4.4 | Construct new 4-lane freeway | Project completes circumferential route that has been in development several years, alleviates congestion from key facilities in core Alcoa, Maryville areas | Full access control facility |

| Plan ID # | Route | Termini | Jurisdiction | Length (miles) | Type of Improvement | Capacity Addition Justification | Additional Measures to Preserve Roadway Capacity |
|---|---|---|---|---|---|---|---|
| 09-246 | William Blount Dr Extension (SR 335) | US 411 (SR 33) @ Wm. Blount Dr to Old Niles Ferry Rd | Maryville/ Blount County | 0.6 | Construct new 2-lane road | Project provides additional network connectivity | Provide accommodations for bike/ped |
| 09-257 | Alcoa Hwy Bypass (SR 115) (US 129) | From Proposed Interchange serving McGhee Tyson Airport to Pellissippi Pkwy (SR 162) | Alcoa | 2.4 | Construct new 8-lane freeway (6 thru lanes plus 2 auxiliary lanes) | Project provides bypass to congested Alcoa Hwy "Airport motor mile" section | Full access control facility |
| 09-258 | Alcoa Hwy Bypass (SR 115) (US 129) | From Pellissippi Pkwy (SR 162) to Near Singleton Station Rd | Alcoa | 1.4 | Construct new 8-lane freeway (6 thru lanes plus 2 auxiliary lanes) | Project provides bypass to congested Alcoa Hwy "Airport motor mile" section | Full access control facility |
| 10-260 | Foothills Mall Dr Extension | Foch St to existing McCammon Ave | Maryville | 0.7 | Reconstruct existing 2-lane road to 2-3 lanes and extend on new alignment to tie-in with Watkins Rd | Provides additional network connectivity. Project will alleviate congestion from US 129 Bypass as parallel facility | Provide accommodations for bike/ped |
| 13-203 | Robert C. Jackson Extension | Louisville Rd to US 129 Bypass | Alcoa | 0.5 | Extension of Robert C. Jackson, Phase 1. Construct new 4-lane section and grade separated interchange connecting US 129 and Associates Blvd | Provides additional network connectivity. Project will alleviate congestion from US 129 Bypass as parallel facility | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 13-204 | Bessemer Blvd | Hall Rd (SR 35) to N Wright Rd | Alcoa | 1.4 | Widen 2-lane to 4-lane with raised median | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 13-205 | Bessemer Blvd | Hamilton Crossing Dr / McCammon Ave to Hall Rd (SR 35) | Alcoa | 0.5 | Widen 2-lane to 4-lane with raised median or center turn lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 13-206 | Tesla Blvd | Associates LIC Project to Springbrook Rd | Alcoa | 0.8 | 4-lane section with median | Project provides access to economic redevelopment area and additional network connectivity | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 13-211 | Foothills Mall Dr | US 129 Bypass (SR 115) to Foch St | Maryville | 0.5 | Extend Foothills Mall Dr across US 129 Bypass on new alignment to Foch St | Provides additional network connectivity. Project will alleviate congestion from US 129 Bypass as parallel facility | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 17-202 | US 129 Widening | Hall Rd (SR 35) to US 321 | Alcoa/ Maryville | 2.6 | Widen from 4-lane to 6-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will maintain limited access at major roadway intersections only (no direct driveway access) |

| Plan ID # | Route | Termini | Jurisdiction | Length (miles) | Type of Improvement | Capacity Addition Justification | Additional Measures to Preserve Roadway Capacity |
|---|---|---|---|---|---|---|---|
| **Knox County Projects** | | | | | | | |
| 09-605 | Schaad Rd Extension | Middlebrook Pike (SR 169) to west of Oak Ridge Hwy (SR 62) | Knox County | 4.6 | Construct new 4-lane road | Project part of plan to complete 4-lane corridor in northwest Knox County between I-75 north and I-40 west to alleviate congestion on sub-standard roadways | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-615 | Washington Pike | I-640 to Murphy Rd | Knoxville | 1.6 | Widen 2-lane to 4-lane | High V/C ratio | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-618 | I-275 Industrial Park Access Improvements | I-275 Corridor (Blackstock Ave, Marion St, and University Ave) | Knoxville | 0.5 | Extend Blackstock Ave from Fifth Ave to Bernard Ave and realign Marion Sreet. Improve intersections of University Ave with W Fifth Ave and Bernard Ave | Provides additional network connectivity to promote redevelopment of industrial areas along I-275 corridor | Provide accommodations for bike/ped |
| 09-623 | I-140 (Pellissippi Pkwy) | I-40 to Dutchtown Rd | Knoxville | 0.4 | Restripe to add one lane on northbound I-140 and remove one lane from the ramp from I-40 | High V/C ratio, eliminates bottle-neck section | Full access control facility, ITS strategies |
| 09-625 | Schaad Rd | Oak Ridge Hwy (SR 62) to Pleasant Ridge Rd | Knoxville/ Knox County | 1.5 | Widen 2-lane to 4-lane | High V/C ratio, Project part of plan to complete 4-lane corridor in northwest Knox County between I-75 north and I-40 west to alleviate congestion on sub-standard roadways | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-628 | Alcoa Hwy (SR 115) (US 129) | Maloney Rd to Blount/ Knox County Line | Knoxville | 3.0 | Widen 4-lane to 6-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Alcoa Hwy projects will include a concrete median barrier to provide partial to full access control. Project also includes a separated multi-use path for pedestrians and bicyclists that will connect several mile corridor btwn Knox & Blount. |
| 09-632 | Concord Rd (SR 332) | Turkey Creek Rd to Northshore Dr (SR 332) | Farragut/ Knox County | 0.8 | Widen 2-lane to 4-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-635 | Karns Connector | Westcott Blvd to Oak Ridge Hwy (SR 62) | Knox County | 0.8 | Construct New 2-lane road | Provides additional network connectivity | Provide accommodations for bike/ped |
| 09-637 | Lovell Rd (SR 131) | Cedardale Ln to Middlebrook Pike (SR 169) | Knox County | 1.7 | Widen 2-lane to 4-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |

| Plan ID # | Route | Termini | Jurisdiction | Length (miles) | Type of Improvement | Capacity Addition Justification | Additional Measures to Preserve Roadway Capacity |
|---|---|---|---|---|---|---|---|
| 09-638 | Oak Ridge Hwy (SR 62) | Schaad Rd to Byington-Beaver Ridge Rd (SR 131) | Knox County | 4.2 | Widen 2-lane to 4-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-643 | Emory Rd (SR 131) | Maynardville Hwy (SR 33) to Tazewell Pike (SR 331) | Knox County | 4.9 | Widen 2-lane to 4-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-644 | Gov John Sevier Hwy (SR 168) | Alcoa Hwy (SR 115) (US 129) to Chapman Hwy (SR 71) (US 441) | Knox County | 6.5 | Widen 2-lane to 4-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-647 | Pellissippi Pkwy (SR 162)/Oak Ridge Hwy (SR 62) | Edgemoor Rd (SR 170) to Dutchtown Rd | Knox County | 6.0 | Corridor safety and capacity improvements to include access control, interchange reconstruction, frontage roads, auxiliary lanes and provision for a shared use path | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project would convert from limited to full access control facility |
| 09-653 | Alcoa Hwy (SR 115) (US 129) | Woodson Dr to Cherokee Trail | Knoxville | 1.6 | Widen 4-lane to 6-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Alcoa Hwy projects will include a concrete median barrier to provide partial to full access control. Project also includes a separated multi-use path for pedestrians and bicyclists that will connect several mile corridor btwn Knox & Blount. |
| 09-654 | I-640/ I-275/ I-75 Interchange | Interchange at I-640 & I-75/I-275 | Knoxville | 1.4 | Interchange improvements to include additional through lanes on I-75 north and southbound ramps | High V/C ratio, eliminates bottle-neck section | Full access control facility, ITS strategies |
| 09-668 | Kingston Pike (SR 1) (US 11/70) | Smith Rd to Campbell Station Rd | Farragut | 1.4 | Widen 4-lane to 6-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-673 | Oak Ridge Hwy (SR 62) | Byington-Beaver Ridge Rd (SR 131) to Pellissippi Pkwy (SR 162) | Knox County | 4.2 | Widen 2-lane to 4-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |
| 09-691 | I-40/75 | I-40/I-75 Interchange to Lovell Rd (SR 131) Interchange | Knoxville/ Farragut/ Knox County | 6.7 | Widen 6-lane to 8-lane | High V/C ratio | Full access control facility, ITS strategies |

| Plan ID # | Route | Termini | Jurisdiction | Length (miles) | Type of Improvement | Capacity Addition Justification | Additional Measures to Preserve Roadway Capacity |
|---|---|---|---|---|---|---|---|
| 09-692 | I-75 | Emory Rd (SR 131) to Raccoon Valley Rd (SR 170) Interchange | Knoxville/ Knox County | 4.8 | Widen 4-lane to 6-lane | High V/C ratio | Full access control facility, ITS strategies |
| 13-603 | I-40/75 | Lovell Rd (SR 131) Interchange to Campbell Station Rd Interchange | Knoxville/ Knox County | 1.8 | Construct eastbound and westbound auxiliary lanes between interchanges | High V/C ratio, eliminates bottle-neck section | Full access control facility, ITS strategies |
| **Loudon County Projects** | | | | | | | |
| 09-423 | US 321 (SR 73) | Simpson Rd to US 11 (SR 2) | Lenoir City | 1.1 | Widen 4-lane to 6-lane | High V/C ratio, public transit options not applicable due to lack of current fixed route service in this jurisdiction | Project will include median/continuous center turn lane and accommodations for bikes/peds |

# APPENDIX I
# SYSTEMS MANAGEMENT

With the passage of MAP-21 (Moving Ahead for Progress in the 21st Century) there has been a significant increase in the emphasis on more effectively managing the existing transportation system and especially in measuring performance conditions such that transportation investments can be more effectively targeted to areas of most need.

This emphasis has been carried forward under the FAST Act (Fixing America's Surface Transportation Act). While we are still awaiting final guidance and rule making related to several of the performance measure areas, this Appendix will provide an overview of the purpose, requirements and steps being taken by the TPO to address system management.

# FAST Act Performance Measurement Overview

Systems performance management is not a new concept; however, the MAP-21 legislation has created a renewed focus by specifically tying federal funding resources toward projects that can be shown to make progress toward achievement of established national goals, which have been continued with the FAST Act.

## National Performance Goals

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

# Performance Measures

The U.S. DOT has identified specific areas of the transportation system that State DOTs and MPOs will be required to measure performance of in order to support the achievement of the National Goal areas listed above. The following chart lists the Performance Measure areas and the current status of federal rulemaking to implement them:

| Measure | Purpose | Proposed Rule | Final Rule |
|---|---|---|---|
| **PLANNING** | | | |
| Metropolitan and Statewide Planning Rule | Establish a performance-based planning process at the metropolitan and state level. | June 2, 2014 | May 27, 2016 |
| | Define coordination in the selection of targets, linking planning and programming to performance targets. | | |
| **HIGHWAY SAFETY** | | | |
| Safety Performance Measure Rule | Propose and define fatalities and serious injuries measures, along with target establishment, progress assessment and reporting requirements. | March 11, 2014 | March 16, 2016 |
| | Discuss the implementation of MAP-21 performance requirements | | |
| Highway Safety Improvement Program (HSIP) Rule | Integration of performance measures, targets, and reporting requirements into the HSIP. | March 28, 2014 | March 16, 2016 |
| | Strategic Highway Safety Plan updates. | | |
| **HIGHWAY CONDITIONS** | | | |
| Pavement and Bridge Condition Measures | Propose and define pavement and bridge condition measures, along with minimum condition standards, target establishment, progress assessment and reporting requirements. | January 5, 2015 | January 18, 2017 |
| Highway Asset Management Plan | Contents and development process for asset management plan. | February 20, 2015 | October 24, 2016 |
| | Minimum standards for pavement and bridge management systems. | | |
| **CONGESTION/SYSTEM PERFORMANCE** | | | |
| System Performance Measure Rule | Define performance of the interstate system, noninterstate national highway system, and freight movement on the interstate system. | April 22, 2016 | January 18, 2017 |
| | Finalize interpretation of scope of CMAQ performance requirements, including congestion and on-road mobile source emissions. | | |
| | Summarize MAP-21 highway performance measure rules | | |
| **TRANSIT PERFORMANCE** | | | |
| Transit Asset Management Rule | Define state of good repair and establish state of good repair performance measures. | September 30, 2015 | July 26, 2016 |
| | Require transit providers to set targets and report on progress | | |
| | Transit asset management plans. | | |
| National Transit Safety Program Rule | Define transit safety criteria and standards. | February 5, 2016 | August 11, 2016 |
| | Include definition of state of good repair. | | |
| Transit Agency Safety Plan Rule | Transit safety plan content and reporting requirements. | February 5, 2016 | Pending |
| | Target setting requirements for transit agencies and states | | |

Subsequent to the Performance Measures being developed, there will be a process of coordination between the Knoxville Regional TPO, TDOT and other system/transit operators to establish the actual performance targets that will desired to achieve. An example of this could be to set a target to reduce traffic fatalities by X% within five years. Data collection needs will have to be identified to track progress and a mechanism for reporting the progress toward achieving each target will be required as well.

Once the final rule has been published for a performance measure, the State DOT has 12 months to establish targets for it in consultation with MPOs. The MPO has 6 months following the establishment of target by the State DOT to either accept the target or establish its own targets. As of the time of the development of this Mobility Plan there have not been any targets established as yet. The TPO staff has attended workshops along with TDOT staff in order to receive guidance on target setting practices and the process to establish targets for the Safety Performance measure are currently underway.

Subsequent updates of the Mobility Plan will be required to specifically report the progress being made in meeting established performance targets as well as evaluations of the contribution of project investment strategies in the Plan towards achieving targets.

# Management and Operations (M&O)

## Overview

National congestion statistics show that 60 percent of traffic congestion is caused by factors other than lack of roadway capacity. These include weather, incidents, poor signal timing, and work zones. The purpose of System Management and Operations (M&O) is to maximize the efficiency of the system to ensure that transportation services are delivered in a safe, reliable, and secure manner. The TPO does not own, maintain, or operate any transportation infrastructure or services. However, it has a role to provide for regional collaboration among system operations stakeholders through a "Planning for Operations" process.

## Federal Requirements

The FAST Act specifically requires that M&O be considered in the metropolitan transportation planning process by including the planning factor "Promote efficient system management and operation" and furthermore that the transportation plan shall include "Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods".

# TPO Planning for Operations Process

The Planning for Operations process is used to develop operations objectives. Those objectives assist in considering operational performance during the planning process. They also incorporate operations solutions into investment decisions that support the operations objectives. The result is a mix of both operations and capital projects that optimize transportation system performance.

The TPO has previously conducted various Planning for Operations activities and organized stakeholder committees for specific planning efforts such as the Congestion Management Process and the Incident Management Taskforce. The following sections provide an overview of two current activities under the Planning for Operations umbrella and a separate section is provided for an update of the status of Intelligent Transportation Systems (ITS) planning in the Knoxville Region:

## SHRP2 Travel Time Reliability Data and Analysis Tools

TDOT was awarded a grant under the 2nd Strategic Highway Research Program (SHRP2) to assist with implementation of technical tools related to addressing travel-time reliability as part of a logical path of improvement from data to decisions. The Knoxville TPO was listed as a partner on the grant application and is participating in the project. There are several components to this effort that will assist the TPO in moving forward with a Planning for Operations process, with one of the key features being the development of a travel time monitoring system that combines data sources to effectively track existing travel time reliability statistics and to identify the specific causes of congestion. Furthermore, tools will be developed that will allow the TPO to specifically quantify project impacts on improving travel time reliability and congestion measures in order to inform project selection. Unfortunately, the data and tools were not yet available to inform this update of the Mobility Plan.

## Traffic Incident Management (TIM)

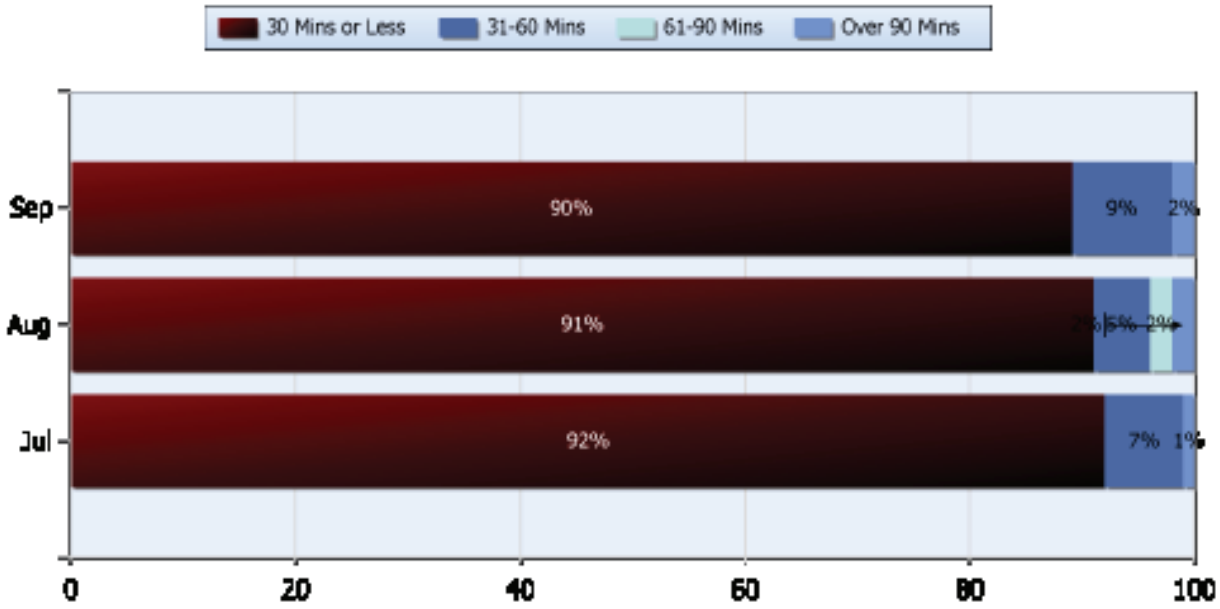
Effective Traffic Incident Management (TIM) is a critical component to ensuring the transportation system is operating efficiently. Quick clearance of crashes and other obstructions to travel lanes has several benefits, including reducing congestion as well as improved safety by lessening the potential for secondary crashes that can result at the back of queues.

M&O objectives related to TIM include organization of a Incident Management Taskforce, TIM Program/Policy Development and tracking Incident Clearance Times.

- Incident Management Taskforce: This taskforce has been in existence for several years and has been a joint effort of TDOT Region 1 and the TPO for organizing and initiating meetings. Lately, TDOT Region 1 has taken the leadership role since focus has been on managing incidents on the urban freeway system. TDOT has jurisdiction, housing the regional Traffic Management Center and operating HELP Truck services. The TPO recognizes that it can play a significant role in facilitating additional discussions on policy issues involved in incident management, such as legislation related to towing performance standards. The TPO plans to engage this committee to a greater extent in the future.

- TIM Program/Policy Development: TIM involves a broad range of interdisciplinary stakeholders that must work in close coordination with one another and have a good understanding of roles and responsibilities at incident scenes. In order to improve coordination and communication among stakeholders, a TIM Taskforce has been meeting on a regular basis in the Knoxville Region, as described earlier. A "TIM Self Assessment" is conducted on an annual basis, identifying areas that need improvement in the TIM Program and Taskforce. The 2015 assessment issued a score of 81.1% for the Knoxville Region, which is good but means that there are areas for improvement. In terms of policy development, there are policies that have been initiated to promote quicker incident clearance, such as state laws regarding moving crashed vehicles from travel lanes, but additional guidance is needed, especially related to performance of towing services.
- Incident Clearance Times: Traffic incidents play a major role in the variability of travel times experienced by motorists on major roadways and are a major component in the cause of nonrecurring congestion. ITS surveillance and detection technologies allow system operators to track the amount of time it takes to get from initial detection of an incident to clearance from the roadway. Objectives can be developed to set a realistic expectation of how long it should take for incident clearance, and performance can be measured to track how well objectives are met. The TDOT Region 1 Traffic Management Center (TMC) "SmartWay" system is already collecting data on incidents and clearance time, and a quarterly summary is provided on the TDOT website. The below figure shows the lane blockage clearance times within the urbanized areas of TDOT Region 1 and indicates that around 90% of the incidents causing lane blockages are cleared in 30 minutes or less.

**Figure I-1:** TDOT Region 1 SmartWay Incident Clearance Times – Third Quarter, 2016




**Source:** *TDOT SmartWay*

# Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) refers to the use of advanced technologies to enhance the management and operation of transportation facilities, increase safety, security, and mobility, and reduce congestion. Following are some of the major elements associated with ITS:

- Vehicle detection devices that report traffic counts, speed, and travel time;
- Video surveillance equipment that monitors roadways for congestion and incidents;
- Roadway sensors that monitor weather and road conditions;
- Communication services and facilities that transmit information;
- Traffic control centers that serve as a central location for traffic management, communication, and collection and coordination of information;
- Variable message signs that display traffic information to motorists; and,
- Roadway service patrols that respond to incidents in a timely manner.

## Regional Intelligent Transportation Systems (ITS) Architecture

The Regional Architecture ensures that ITS projects funded by federal transportation dollars are in compliance with the National ITS Architecture so that separate ITS components will be compatible and integrated with one another. It identifies which ITS user services will be provided for the Knoxville Region along with the roles and responsibilities of stakeholders involved in its deployment. The high priority ITS service packages identified for the Knoxville ITS Plan are: Traffic Management, Public Transportation Management, Emergency Management, Traveler Information, Maintenance & Construction Management and Archived Data Management.

The TPO completed a major update to the Knoxville Regional ITS Architecture in late 2012 and has been maintaining it since that time. It is posted at: http://www.kimley-horn.com/projects/tennesseeITSarchitecture/knoxville.html. The ITS Architecture was developed with the assistance of a broad range of regional operations stakeholders. M&O and ITS are directly linked - most, if not all, of the strategies used to better manage transportation systems involve solutions that are covered under the ITS umbrella of "User Services."

A key aspect of the Regional ITS Architecture was the development of an "ITS Deployment Plan" which identified specific ITS projects and strategies to be implemented in the Knoxville Region along with prioritization of short-, medium-, and long-term deployment efforts. Projects from this deployment plan have been programmed directly into the Mobility Plan project list (Appendix E) and several are already underway. To date, the focus of ITS deployments in the Knoxville Region have involved TDOT's investment in Freeway Management systems, local governments' investments in Traffic Signal Operations and public transportation ITS investments as further described below:

- TDOT Freeway Management System (Region 1 SmartWay): TDOT's freeway traffic management system was the first large scale deployment of ITS in the Knoxville Region
- to address operations and management of the Interstate system. Some of the key features of the system include the use of CCTV cameras, Speed Detectors, Highway Advisory Radio and Dynamic Message Signs (DMS) that have been strategically placed along the freeway system to monitor traffic conditions, identify potential incidents and provide pertinent, real-time information to travelers. The system is currently operated on a 24/7 basis through a physical Traffic Management Center located at the TDOT Region 1 headquarters campus. The TMC staff controls the direction of traffic cameras, incident detection, verification, and coordination and HELP truck deployment to incident locations. One of the projects listed in the ITS Deployment Plan is to continue the geographic expansion of the coverage of the SmartWay system in Knoxville through installation of additional cameras and other devices along additional miles of roadway.
- Traffic Signal Operations: Traffic signals play a significant role in the day-to-day operations of the roadway system in the Knoxville Region and can be a major source of unnecessary delay to motorists when improperly timed or malfunctioning. It is challenging for traffic engineering departments in the region to re-time signals on frequent enough basis due to staff constraints. Departments must also keep up with the common malfunction of broken detector loops in the pavement, causing signals to revert to fixed time patterns, which reduces their efficiency. The TPO staff believes that improvement of traffic signal operations is one of the lowest hanging fruits in terms of improving efficiency and reducing congestion on arterial roadways in the Knoxville Region. The ITS Deployment Plan included projects for signal systems upgrades in each of the TPO jurisdictions and most have projects under development through the use of CMAQ grant awards.
- Public Transportation ITS: Intelligent Transportation Systems can be used by public transportation agencies to track transit vehicles, provide route information, aid in fare collection and management, and provide transit information to passengers. In 2005, Knoxville Area Transit (KAT) had an ITS Assessment undertaken which laid out a prioritization plan. This assessment was updated in the 2009 KAT Transit Development Plan and then again as part of the 2012 Regional ITS Architecture and Deployment Plan. Project #17-1009 in this Plan has been selected to fully implement ITS technologies for KAT using TPO Local Surface Transportation Block Grant program funds what will be flexed to FTA. The project description is as follows: 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.

# Summary

The new emphasis on performance management and target setting based on the FAST Act requirements described previously provide an opportunity to combine all of the activities described in this Appendix into one comprehensive Systems Management & Operations approach that will be a major focus of the TPO staff in 2017.

# APPENDIX J
# SAFETY & SECURITY
## Tennessee Strategic Highway Safety Plan

### In November 2004, the State of Tennessee was the first state to complete a Strategic Highway Safety Plan (SHSP).

It was recently updated in 2014, with the stated goal of reducing the number and rate of fatalities by 10% within the next five years while reducing the trend of increasing serious injuries by remaining under the 2012 serious injury total of 7,574. The Plan's slogan for 2014 is "Driving Down Fatalities" and adopts a "Toward Zero Deaths" vision statement, which is a nationally recognized collaborative effort. It addresses emphasis areas with strategies and countermeasures that utilize the Four E's of transportation safety: Engineering, Enforcement, Education, and Emergency Response. The Plan details six areas of emphasis:

1. Data Collection & Analysis
2. Driver Behavior
3. Infrastructure Improvements
4. Vulnerable Road Users
5. Operational Improvements
6. Motor Carrier Safety

The development of this Plan is a combined effort of a Steering Committee comprised of TDOT, the Governor's Highway Safety Office (GHSO), Tennessee Department of Safety and Homeland Security (TDOSHS), Tennessee Highway Patrol (THP), TN Metropolitan Planning Organizations (MPOs) and Rural Planning Organizations (RPOs), Tennessee Regional Safety Council (TRSC), Tennessee Transportation Assistance Program (TTAP), American Automobile Association (AAA), and Federal Highway Administration (FHWA), and Federal Motor Carrier Safety Administration (FMCSA).

This Steering Committee has taken on the responsibility of developing and implementing this safety plan to meet MAP-21 (Moving Ahead for Progress in the 21st Century Act) requirements, a 2012 transportation act which has now been modified to the new FAST Act. This new Act will build upon the changes made by MAP-21.

The Fixing America's Surface Transportation (FAST) Act was signed into law on December 4, 2015 and continued the Highway Safety Improvement Program (HSIP) with only minor changes. The FAST Act confirmed the overall purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads through the implementation of infrastructure-related highway

safety improvements. In order to be able to use HSIP funds in Tennessee, a current and approved SHSP is required. The SHSP must also be updated within a five year period of its approval date in order to remain current and for the State to maintain HSIP fund obligation eligibility.

The Tennessee Highway Safety Improvement Program (HSIP) is managed by the Tennessee Department of Transportation (TDOT). A project identified through TDOT's safety needs investigation process must be qualified using the three most current years of crash data, have a minimum of five or more crashes with one of the crashes involving a fatality or incapacitating injury. The HSIP includes several programs:

## Road Safety Audits (RSAs)

Identify and review roadway segments with disproportionate occurrences of roadway departure related crashes. Fund and prioritize improvements to these segments through federal-aid and state-aid roadway departure safety programs based on the number and severity of fatal and injury crashes on interstate, state and local routes.

## Spot Safety Program

Initiate safety studies by regional TDOT Traffic Engineers of state route intersections located within cities or towns with populations of less than 50,000. Develop limited-cost safety projects for eligible sites to install at traffic signal, fix a sight distance problem, add turn lanes with or without a traffic signal, install a flashing beacon or install school flashing signals.

## Roadway Departure Action Plan (RDAP)

The Roadway Departure Safety Plan was developed to implement cost effective countermeasures along roadways to reduce fatal and incapacitating injury crashes.

## Intersection Action Plan (IAP)

The Intersection Safety Action Plan was developed to implement cost effective countermeasures at intersections to reduce fatal and incapacitating injury crashes.

## High Friction Surface Safety Initiative (HSSI)

The HSSI will take a systemic approach of implementing lane-departure countermeasures to identified horizontal curves.

## Ramp Queue Program

The goal of the Ramp Queue Program is to identify, analyze, and correct conditions where exit ramp storage extends onto the mainline traveled way or entering ramps that cause mainline backups. The Department's Annual Queue Inspection (AQI) takes a proactive approach of finding these potential fatal circumstances by recording annual queuing data at quarter lengths (¼, ½, ¾, and full queue). Locations for potential projects for the Ramp Queue Program are selected from recommendations by the Region Traffic offices, other stakeholders or AQI.

TDOT produces an annual report on the HSIP (link).

# Crashes Involving Bicyclists and Pedestrians

| | Crashes per year | # Involving pedestrians | # Involving bicyclists | Time period of data |
|---|---|---|---|---|
| Alcoa | 7 | 20 | 11 | 1/11 - 4/15 |
| Blount County | 5 | 14 | 5 | 9/10 - 9/14 |
| Farragut | 5.5 | 7 | 10 | 3/12 - 3/15 |
| Knox County | 15 | 46 | 9 | 8/11 - 4/15 |
| Knoxville | 112 | 702 | 257 | 12/6 - 6/15 |
| Lenoir City | 4 | 15 | 1 | 7/11 - 4/15 |
| Maryville | 12 | 41 | 14 | 9/10 - 4/15 |
| Oak Ridge | 11 | 26 | 14 | 8/11-4/15 |

## Preliminary Data Analysis of Traffic Crashes Involving Pedestrians and Bicyclists

Analysis has focused on the City of Knoxville because it has the highest number of crashes, especially the highest number of crashes able to be mapped. This is due to the reporting methods for other enforcement agencies.

- The data includes 960 crashes; 702 involved pedestrians and 257 bicyclists. One crash involved both.
- The crashes occurred between Dec 2006 and Jun 2015, for a rate of 112 crashes per year.
- Almost all of the crashes (93%) involve the injury or death of a person walking or bicycling. 862 crashes involve an injury, and 29 involve a fatality. Two of the fatal crashes involve two fatalities each. Of the 31 total fatalities, 30 were killed while walking, the other while bicycling.

Preliminary analysis has been conducted, focusing on identifying patterns where interventions (e.g. design changes or education) could help to prevent future crashes. Twenty-four percent of the crashes fit into one of these categories.

**Categories of crashes analyzed in this report are:**

- People struck by cars while walking in locations without sidewalks. In these locations, the addition of sidewalk would presumably prevent future crashes of this type.
- People walking and bicycling struck by drivers failing to yield. Crashes analyzed are ones where the report indicates that the pedestrian or bicyclist was crossing legally and the driver failed to yield. In locations or corridors with multiple crashes of this type, changes to the geometry of the intersections and/or to the function of the traffic signals may help prevent future crashes. Education and traffic enforcement may be needed as well.

  Of the mapped crashes, 142 (15 percent) involved pedestrians or bicyclist hit by cars whose drivers failed to yield properly when turning at intersections (or while turning at other locations). Of these failure-to-yield turning crashes, 87 crashes involved drivers turning left, while 55 involved right turns. Of the right-turning crashes, 31 were drivers turning right on red.

Of these failure-to-yield crashes, 35 involved bicyclists. 22 of those involved a driver turning left, while 13 involved right turns, of which 6 were drivers making a right turn on red (RTOR). (Bicyclist cases are included only where the crash report states that the bicyclist was operating safely and the driver failed to yield.)

The remainder of the failure-to-yield crashes, 107, involved pedestrians. (Pedestrian cases are included only where the crash report states that the pedestrian was crossing in a crosswalk, marked or unmarked, and at signalized intersections was crossing with the pedestrian indication, where present, or with the green light for through traffic. This excludes cases where the crash report concludes that pedestrians crossed against the light or it's ambiguous.) Of the pedestrian incidents, 65 involved drivers turning left, and 42 involved drivers turning right. Of the right-turning crashes, 25 were right turns on red (RTOR).

- People riding bicycles in unsafe conditions. In these cases, the crash report indicated that the bicyclist was riding in a manner or location that is dangerous: riding on a sidewalk (which is legal, but has been demonstrated to be less safe than riding on the road), riding on the street against traffic, or riding at night with no lights.

  Thirty-four crashes (3.5 percent of mapped bike crashes) were associated with bicyclists riding on the sidewalk. Six bicyclists were struck while riding against traffic. 8 bicyclists were struck while riding at night with no lights.

# First and Last Mile

## Every person who takes public transit must walk, drive, or bicycle to the transit stop or station. This is referred to the 'first and last mile' of the user's trip.

When people commute from their home to transit (or vice versa), they must decide how they will get there. Will they drive their cars and find parking? Is it easier, safer, and more convenient to walk or bike? If biking, will the person have a place to store their bicycle or have the option to carry onto the bus? In order to encourage more ridership, transit needs to provide safe, accessible, and convenient options that enable point to point connections.

The convenience of a first and last mile trip largely depends on three factors:

- How far is it to the nearest bus stop on both ends of the trip?

As a general rule, the average transit rider is willing to walk a quarter-mile to access fixed-route bus service and up to a half-mile for high capacity services that operate with higher frequencies.

- How easy is it to combine bicycling, driving, or a ride sharing service with the transit trip? Are there places to park and/or places to be dropped off or picked up at the transit facility? Can bicyclists bring bikes on board?

First, bicyclists are often hesitant to lock up their bikes and leave them for long periods if a transit stop does not have adequate bike parking facilities. Many transit agencies provide secure bicycle parking at stops and stations and allow riders to load bikes onto front- mounted bicycle racks so that the bike is available for both first- and last-mile connections.

- What are the physical conditions of biking and pedestrian infrastructure between the origin/ destination and the transit facility?

Examples of improvements for walking include:

- Adding new (or redesigning old) pedestrian crossings around transit stops and stations can improve access as well as rider safety and comfort.
- Improving sidewalk infrastructure increases the attractiveness of walking, while allowing the opportunity to design for safety (e.g., traffic buffers), accessibility (e.g., wheelchair ramps), and security (e.g., lighting).
- Wayfinding, including signs pointing to transit services (and pedestrian network maps at transit stations), can improve a person's experience with transit and draw attention to existing transit services.

Private ride-hailing services like Uber and Lyft are often much more widely available than taxis for the first and last mile connections. Moreover, the ability to book via smartphone means that a ride can be summoned easily in areas where traditional taxis cannot be found or require long waits. There has been a recent move toward more formalized arrangements between transit agencies and ride-hailing companies. The City of Gainesville, FL announced a partnership in 2015 between Uber and a local eldercare network providing subsidized rides for residents ages 60 and older. A new partnership in 2016 between Lyft and the National Medtrans Network helps seniors hail Lyft rides using Concierge, a new web-based dashboard. This service allows health care professionals to request rides for patients by entering their name, pick-up location and destination – no smartphone required.

# Increasing Safety of People Walking

The frequency and severity of motor vehicle/pedestrian crashes can be reduced through a broad range of approaches, including targeted traffic enforcement, engineering countermeasures, public education, and vehicle design changes. Some noteworthy examples are provided below.

Evidence-based strategies to Increase Separation of Pedestrians from Motor Vehicles include:

- Refuge islands
- Sidewalks and pedestrian overpasses / underpasses
- Optimized traffic signal timing
- New traffic signals where warranted
- Evidence-based strategies to Make Pedestrians More Visible to Drivers include:
- Improved street lighting
- High-visibility crosswalks
- Rectangular rapid-flashing beacons (RRFBs) mounted to pedestrian crossing signs Higher vehicle speeds are strongly associated with both a greater likelihood of pedestrian crashes and more serious pedestrian injuries.
- Evidence-based Engineering and Enforcement Measures to Reduce Speeds include:
- Road diets that create space for other uses (e.g., bicycle lanes, sidewalks, turn lanes)
- Roundabouts in place of stop signs and traffic signals
- Traffic calming devices such as speed humps and curb extensions
- Automated enforcement as a supplement to traditional enforcement

# Security

The groups that TPO coordinates with on security issues include:

- Tennessee Department of Transportation (TDOT)
- Tennessee Department of Safety (TDOS)
- Tennessee Emergency Management Agency (TEMA)
- Tennessee Highway Patrol (THP)
- Knoxville-Knox County Emergency Management Agency
- Local law enforcement
- Local engineering officials
- Emergency personnel

The TPO has attended meetings of the East Tennessee Safety and Maintenance Committee (ETSMC), the Tennessee Trucking Association, and includes members of the State Governor's Highway Office and ETSMC on its Freight Advisory Committee.

In Tennessee, many steps have been taken to improve safety in the transportation system. In June 2006, the Knoxville Urban Area Incident Management Taskforce was established. Comprised of several stakeholders – TDOT, KPD, EMS-911, Tennessee Highway Patrol, and the Knoxville Regional TPO – the taskforce explores new initiatives and seeks to increase efficiency in Incident Management. Incident Management encompasses a variety of activities undertaken to:

- Assist involved motorists
- Protect public health and safety
- Conduct necessary investigations
- Minimize travel disruptions and delays

# APPENDIX K
# PROJECT APPLICATION FORM

MobilityPlan 2040
CONNECTING PEOPLE AND PLACES

# 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 email 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 FORM — MOBILITY PLAN 2040

| | | |
|---|---|---|
| **PROJECT NAME:** | | |
| **LEAD AGENCY:** | | |
| ☐ New Project ☐ Existing Project - If Existing, Enter 2013 RMP ID# Here: | | |
| **COUNTIES/MUNICIPALITIES:** | | |
| **FACILITY NAME:** | | |
| **TERMINI (If Applicable):** **Include a map** | FROM: | LENGTH: |
| | TO: | |
| **GENERAL DESCRIPTION:** | | |

### PHASES COMPLETED (SELECT ALL THAT APPLY):

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

### 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.

**Local Support / Consistency with Plans**

*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, but not limited to, a local major thoroughfare plan, transportation element of a comprehensive plan?
- If on a state route, is the project endorsed or supported by TDOT?

PROJECT NAME:_____

**Within which category should this project be evaluated?**

☐ 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; regional greenways; regional transit)*

**In addition to the sections below, fill out the information requested under the project evaluation section beginning on page 8 for either within community OR community to region.**

**Please fill out <u>one</u> of the following Scope of Work sections: Roadway, Transit, or Pedestrian and Bicycle.**

## ROADWAY PROJECT SCOPE OF WORK

☐ Roadway Widening (Additional Through Lanes)
☐ Roadway Widening (No Additional Through Lanes)
☐ ITS Improvements and/or Operational
☐ Corridor improvements
☐ Intersection Improvements
☐ New Roadway / Roadway Extension
☐ Other _____

**How are you accommodating bicyclists and pedestrians?**

☐ Bicycle Lane ☐ Sidewalk
☐ Ped. Refuge ☐ Ped. Indication (Signal)
☐ Marked Crosswalks ☐ Shared Lane (14' wide)
☐ Greenway
☐ Other _____

**Land Uses Within ¼ Mile of Facility:**

*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.*

| | | | | | | |
|---|---|---|---|---|---|---|
| ☐ Public park/greenway | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ School | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ Library | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ Transit Stop | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ Multifamily residential | ☐ *Yes* | ☐ *No* | ☐ *Some* |

**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 information about the proposed projects scope of work. If applicable, provide the proposed cross-section, including current number of lanes, proposed number of lanes and proposed medians or center turn lanes proposed Improvements in the box below.**

## 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 information about the proposed project's scope of work.*

## BICYCLE OR PEDESTRIAN PROJECT SCOPE OF WORK

**Proposed Improvements:**

- ☐ New Facility
- ☐ Extension/Connector
- ☐ Amenities/Upgrades
- ☐ Intersection Improvements
- ☐ Safe Routes to School program
- ☐ Other _____

**Type:**

- ☐ Bicycle Lanes ☐ Sidewalks
- ☐ Shared-Use Trail (Greenway)
- ☐ Education
- ☐ Other _____

**Proposed Features:**

- ☐ Pedestrian Refuge
- ☐ Marked Crosswalks
- ☐ Pedestrian Indication (Signal)
- ☐ Other _____

**Land Uses Within ¼ Mile of Facility:**

*Below, check boxes **at left** to indicate if these land uses are present within ¼ mile of your proposed facility.*

| | | | |
|---|---|---|---|
| ☐ Public Park | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ School | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ Library | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ Transit Stop | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ Retail | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ Office | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ Residential | ☐ *Yes* | ☐ *No* | ☐ *Some* |
| ☐ Other _____ | ☐ *Yes* | ☐ *No* | ☐ *Some* |

*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.*

*Please utilize the box below to provide additional information about the proposed project's scope of work. Project must serve a transportation purpose.*

## PROJECT COSTS, FUNDING, & TIMING

**Source of Cost Estimate:**

- ☐ Rough Planning Est.
- ☐ Planning Report
- ☐ Preliminary Eng.
- ☐ TDOT Estimator Tool
- ☐ Other _____

**Are Matching Funds Available?**

- ☐ YES, Funds are locally programmed
- ☐ YES, Funds will be locally programmed
- ☐ NO
- ☐ OTHER _____

**Federal Funding Requested:**

- ☐ 100% of Cost
- ☐ 90% of Cost
- ☐ 80% of Cost
- ☐ _____% of Cost
- ☐ NO (State and Local Only)

**By When Should This Project Be Completed?**

- ☐ by 2022
- ☐ by 2026
- ☐ by 2030
- ☐ by 2034
- ☐ by 2040

**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.

| **Is a Knoxville Regional TPO member a sponsor and financially committed to the project?** |
|---|
| ☐ Yes ☐ No |

| **Is the project in the current FY 2014-2017 TIP?** |
|---|
| ☐ Yes *(TIP#_____)* ☐ 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 |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
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| | | | | | | |
| | | **TOTAL** | | | | |

PROJECT NAME:_____

## ABOUT YOU

**Name:** _____ **E-mail:** _____

**Title:** _____ **Phone:** _____

**Department:** _____

**Agency / Organization:** _____

## ATTACHMENTS

**Please include ALL relevant attachments with this application, including the following:**

- ☐ Cost Estimate / Methodology
- ☐ Other: _____
- ☐ Map of Project (If Applicable)
- ☐ Other: _____
- ☐ NEPA Approval Letter (If Applicable)
- ☐ Other: _____

PROJECT NAME: _____

## 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.

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: _____

4. **Equitable 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 map of priority population areas*.)

5. **Health 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 practices?

6. **Congestion reduction – 8 points**
   - Does the project reduce congestion through technology (*e.g. traffic signal coordination, real-time traffic info, and emergency response*), adding transportation options or increasing capacity?

7. **Preservation 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*)

PROJECT NAME: _____

8. **Economy and freight – 4 points**
   - 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?

## 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.

### 1. Maintenance and efficiency – 19 points

- 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?

### 2. More options – 17 points

- Does the project support bicycling, walking, and/or transit?
- Does the project connect major, regional origins and destinations for walking, biking, and transit?
- Does the project address first mile/last mile connectivity for transit?

### 3. Safety 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?

### 4. Congestion reduction – 12 points

- Does the project reduce congestion through technology (*e.g. traffic signal coordination, real-time traffic info*, emergency response), adding transportation options, or increasing capacity?

PROJECT NAME: _____

**5. Preservation of Places – 11 points**

- Does the project minimize negative impacts on sensitive natural and cultural areas of regional 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 L
# AIR QUALITY CONFORMITY DETERMINATION REPORT

Provided as a seprate report

# APPENDIX M
# ADOPTION LETTERS

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,

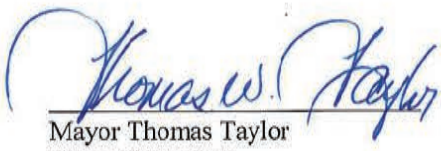
WHEREAS, the TPO's public outreach and Interagency Consultation procedures were adhered to with Mobility Plan 2040 and the Air Quality Determination being circulated for public review, presented at more than two open public meetings and coordinated with stakeholder and regulatory agencies through the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

# APPENDIX N FINANCIAL PLAN

## Financial Plan Background and Additional Discussion on the Future of Transportation Funding

## Transportation Funding Sources

### Federal Funding

The greatest funding source for transportation projects is from the federal government. The Federal-Aid Highway Act and the Highway Revenue Act in 1956 established the Highway Trust Fund in order to create a financing mechanism for the Interstate Highway System. This is the source of funding for most of the transportation programs at the federal level. The funds come from a variety of sources, primarily motor fuels tax and are administered by the U.S. Department of Transportation. The Fixing Americas Surface Transportation Act (FAST Act) is the most recent federal legislation supporting our nation's transportation program was adopted in the fall of 2015.

**National Highway Performance Program (NHPP)**

Roadways eligible for this funding include rural and urban roads serving major population centers, other rural and urban principal arterials, the Interstate system, international border crossings, intermodal transportation facilities, and major travel destinations. The NHPP provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS. Other areas of eligible funding are publicly owned bus terminals, infrastructure-based intelligent transportation system capital improvements, and natural habitat mitigation. This program is managed by the Tennessee Department of Transportation. Projects are selected by the Tennessee Department of Transportation in cooperation with the TPO.

**National Highway Freight Program (NHFP)**

The FAST Act established a new program to improve the efficient movement of freight on the National Highway Freight Network (NHFN) and support several goals include improving the safety, security, efficiency and resiliency of freight transportation and investing in infrastructure and operational improvements that strengthen our nation's economic competiveness and increases productivity. This program is managed and projects are selected by the Tennessee Department of Transportation.

**Highway Safety Improvement Program (HSIP)**

The purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. This program is managed and projects are selected by the Tennessee Department of Transportation.

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

Projects eligible for funding under this program include construction, reconstruction, and rehabilitation (major resurfacing) of any Federal Aid Highway, including the NHS, rural minor collectors, bridge projects on any public road, transit capital projects, enhancement projects, and public bus terminals and facilities carpool projects, fringe/corridor parking facilities, bike/pedestrian walkways, and safety infrastructure. In general, STBG projects may not be on local functional classified road. Both TDOT and the TPO receive an annual allocation of STBG funds.

**Congestion Mitigation and Air Quality (CMAQ)**

The CMAQ program was designed to assist non-attainment and maintenance areas in attaining the National Ambient Air Quality Standards for ozone, carbon monoxide (CO), and particulate matter by funding transportation projects and programs that will improve air quality by reducing transportation related emissions. This program is managed and projects are selected by the Tennessee Department of Transportation with input from the TPO.

**Transportation Alternatives (TA)**

The FAST Act created a set-aside of Surface Transportation Block Grant (STBG) funding for transportation alternatives (TA). These set-aside funds encompass a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects to mention a few. The TPO administers the project selection of projects for this program.

**High Priority Projects (HPP)**

MAP-21 ended the tradition of past highway bills by no longer providing designated funding for specific projects identified by Congress. There are a couple of projects where HPP funding is still committed in the TPO area.

## State Funding (STATE)

In addition to the Highway Trust Fund allocations, the State of Tennessee revenue for surface transportation projects comes primarily from motor fuel taxes. Tennessee is a pay as you go state and does not incur debt to finance the construction or maintenance of the state's surface transportation system.

**Fuel Taxes**

This source of funding is utilized by TDOT to support transportation improvements throughout the entire State. The current gasoline tax amount is 21.4 cents per gallon and has not been increased since 1989. These funds are used for state projects and to match federal funds.

**Local Funding (LOCAL)**

Local towns, cities, and counties use their respective General Fund as the primary source of funding for operations and maintenance. Some counties have instituted a local wheel tax in addition to the State motor vehicle registration fee to support the general fund. Local jurisdictions also provide funding in full or to match federal or state funds for local transportation projects. Money for capital investments in streets and highways may also come from the sale of bonds.

Locally, the jurisdictions in the TPO Area have alternative sources of funding authorized by the state enabling legislation to finance transportation projects. These sources of funding can include rail authorities, local gasoline tax, local motor vehicle taxes, and road improvement districts. These sources can help to generate a steady flow of funding for transportation improvements. The following describes these options as well as other local funding tools available.

**Special Assessment Districts**

Special Assessment Districts are designated areas within which commercial and residential property is assessed a charge sufficient to defray the costs of capital improvements that benefit the property within the district. Transportation Development Districts (TDDs) are one example of these districts used to finance transportation improvements.

**Impact and Utility Fees**

This one-time fee is imposed by local governments on new developments to help pay for the capital facilities, mainly extending utilities and putting in traffic enhancements and transit facilities that serve it. A fee is typically assessed on the square footage of the planned development and in some cases, the granting of a building permit is made contingent on payment of the fee.

**Bond Financing**

Bond financing helps local government pay for projects by establishing a type of payment plan that allows capital costs to be spread out over a number of years.

**Property Taxes**

This is the chief source of local revenue. The funds are distributed to a General Fund and then appropriated for transportation purposes. These taxes are dependent on local economic conditions. Typically, they remain a steady and reliable source of revenue. A separate tax for transit operations and capital can be administered by voter approval.

**Local Gasoline Taxes**

Counties, municipalities, and metropolitan governments are authorized under Section 67-3-101 to 67-3-1013 of the Tennessee Code Annotated to impose a local gasoline tax to support local public transportation services. Imposition of the tax requires a majority vote in public referendum.

**Sales Taxes**

This is one of the most commonly used and a major source of general revenue for state and local jurisdictions. This tax is placed on the sale of consumer goods and services, and purchases by business firms of items for business use. The tax is a function of the tax rate, use of funds and of redistribution formulas. A sales tax is generally more acceptable to citizens than other taxes since the tax is collected in small amounts that are not highly visible to consumers.

**Wheel Taxes**

Counties are authorized under Section 5-8-102 of the Tennessee Code Annotated to impose a local motor vehicle tax to provide revenue for county purposes. Imposition of the tax requires a majority vote in public referendum or a two-thirds vote from the county legislators at two consecutive meetings.

# Public Transportation Funding Sources

## City of Knoxville

Between 1999 and 2013, the City of Knoxville increased its contribution on average by 5.29%. The City has increased its contribution to KAT every year for the last fifteen years. As mentioned, part of the City's funding increases include, absorbing the JARC service and paying for the operations of Knoxville Center. It was felt that it was not reasonable to expect the City to continue to increase their contribution by a percentage of 5% or greater until 2040. It was felt the amount the City would contribute would eventually level off. Staff agreed to that an adjustment to 4.75% a year would be appropriate for the Mobility Plan.

## State of Tennessee

The State of Tennessee has increased its contribution nine of the last fifteen years. Between 1999 and 2013, the State increased their contribution by 4.93%. For the last five years, the State has slowed their increases. The State of Tennessee, like other states, is going through difficult economic times and tax revenues are unpredictable. To remain conservative, staff decided that an annual percentage rate of 2.5% per year would be reasonable for the analysis.

## Other Federal and State Sources

This category includes several Federal grants and State revenue sources. This funding category has seen an average annual increase of 4.61% from 1999 to 2013. For the 2009 Mobility Plan a 5% annual increase was used. With some uncertainty of funding at the federal level, it was decided to remain slightly more conservative and to reduce the annual increase to 4%.

## Fares

From 1999 to 2013, the annual average increase in fare revenue was 6.72% a year. While revenues from fares continue to increase, over the last few years the annual average increase has lessened. KAT over the last few years has continued to see strong ridership increases. However, an increase of 6.72% a year is too high. Therefore, staff determined an adjusted annual increase of 4.87% would be appropriate.

## Other Revenues

This category reflects revenue collected through other programs and grants. Some of this is the subcontracting of special services. From 1999 to 2008, the other revenues category increased by an annual rate of 10.5% bringing in almost $500,000 a year. Recent changes in the Federal requirements associated with subcontracting makes predicting revenue under this category difficult. Therefore, to be conservative this funding source was removed from the analysis. However, KAT is dedicated to pursuing other revenues and funding opportunities and expects some revenue in this category.

# Transit Financial Constraint Analysis (TFCA)

Within the Knoxville urbanized area, a variety of governments, agencies, and organizations use federal funding to provide transit service and purchase transit vehicles. The main source of funding is Federal Transit Administration (FTA) grants. The TPO also uses a portion of its local Surface Transportation Program (STP) to help fund transit capital projects. Local transit agencies can apply for Congestion Mitigation & Air Quality (CMAQ) grants from TDOT. The Transit Fiscal Constraint Analysis (TFCA) examines the fiscal needs and potential revenue sources of the transit providers in the TPO area to ensure services can be sustained over the life of the Mobility Plan.

**Knoxville Area Transit (KAT)** – KAT is the largest provider of public transportation in the region. Approximately 80% of KAT's operating costs are drivers' salaries with the remaining 20% going toward administration, marketing, maintenance, and other expenses.

**KAT Operating Analysis** – In order to project future funding needs, a trend analysis was conducted of KAT's past budgets. In 2000, KAT's budget was $8.9 million. By 2008, KAT's budget had nearly doubled to $17.2 million. Much of the increasing costs were associated with new services. In 2013, KAT's budget grew to its largest amount of $20.5 million. Over the last 15 years, KAT's budget increased an average of 5.67% per year. However, over the last five years, that growth has slowed to an average annual increase of 1.66%.

KAT's revenues come from a variety of sources. Primary revenue sources, by percentage, are: the City of Knoxville (48.8%), FTA (19.9%), fare box (18.8%), and the State of Tennessee (12.8%).

There are several reasons for funding fluctuations. Fuel prices have been volatile over the past 10 years, and the City has had to contribute extra to cover high costs in some years. KAT has occasionally received grants to introduce new transit service for a trial period. (If the pilot is successful, the City of Knoxville or the recipient of the service has to fund the service or it is discontinued.) This time period also saw the addition of and then loss of the University of Tennessee campus transit service, the loss of the FTA Job Access & Reverse Commute grant, and new expenses associated with the opening of Knoxville Station.

**Table N-1:** Snapshot Of KAT Operating Revenues (FY2000-FY2015)

| Source | 2000 | 2008 | 2011 | 2015 | Avg. % Change Per Year 2000-2015 | Avg. % Change Per Year 2011-2015 |
|---|---|---|---|---|---|---|
| City of Knoxville | $4,117,970 | $7,814,850 | $8,972,860 | $9,017,550 | 5.51% | 2.37% |
| State of Tennessee | $1,554,320 | $1,971,310 | $2,050,754 | $3,113,900 | 7.37% | 10.37% |
| FTA | $1,621,532 | $3,263,082 | $3,223,238 | $4,539,937 | 8.79% | 7.65% |
| Fares | $1,323,874 | $3,657,537 | $3,994,860 | $2,406,012 | 5.87% | -6.15% |
| Other funding | $269,961 | $527,258 | $62,723 | $0 | -6.31% | 0.79% |
| **Total Revenue** | **$8,887,657** | **$17,234,037** | **$18,304,435** | **$19,077,399** | | |
| Operating Expenses | $8,887,657 | $17,234,037 | $18,304,435 | $18,365,496 | 5.67% | 1.66% |

Table Two shows the growth of KAT's expenses and revenues from 2000-2015. The annual cost of operating increased an annual average of 5.67%. However, over the past five years the average annual growth rate slowed to 1.67%. Several forecasting tools were considered, including the Consumer Price Index (CPI). Examining the last ten years, the CPI's average annual rate of increase for our region of the United States was 2.07%. After discussion, with

**Table N-2:** KAT Financial Assumptions

| Source | Trend Analysis 2000-2015 | Trend Analysis 2011-2015 | Average % Growth CPI 2005-2015 (South) | City of Knoxville Traditional Forecasting Measure | Forecast For Mobility Plan* |
|---|---|---|---|---|---|
| City of Knoxville | 5.51% | 2.37% | | | 1.50% |
| State of Tennessee | 7.37% | 10.37% | | | 0.00% |
| FTA | 8.79% | 7.65% | | | 4.00% |
| Fares | 5.87% | -6.15% | | | 3.00% |
| Other funding | -6.31% | 0.79% | | | 0.00% |
| Operating Expense | 5.67% | 1.66% | 2.07% | 3.00% | 3.00% |
| *See discussion on decennial adjustments made to State of Tennessee and Federal revenues due to projected urban area growth | | | | | |

KAT staff, it was determined that the CPI growth factor was too conservative. The City of Knoxville Finance Department traditionally uses a 3.0% inflation factor for long-term forecasts, and that is what was used for this analysis.

## KAT Revenues Forecast

The TPO staff, in consultation with KAT staff, reviewed each revenue source and determined a rate of increase to use for this analysis. A more detailed discussion on each revenue source follows.

**City of Knoxville Funding** – The City increased its contribution on average by 5.51% per year over the analysis period. Between 2000 and 2013, the City increased its contribution each year. From 2009 to 2013 the City had to help offset significant increases in fuel costs. During the last two years, the City's contributions decreased slightly. For this analysis, the City's forecasted contributions to KAT are set at an annual growth rate of 1.5%. The City essentially underwrites the KAT budget and makes up any unforeseen short term deficits. Conversely, any revenues above expected are returned to the City's general fund. Therefore, as KAT's other revenue sources grow, the City's contributions would be adjusted accordingly.

**State of Tennessee Funding** – The State provides transit funding through the Tennessee Department of Transportation (TDOT). State revenues have increased an average of 7.37% per year. In FY 2014, the State changed funding distributions. Now, after every decennial census, the State recalculates their allocations based on a formula that includes the urban area population. Except in the year in which the formula is recalculated, the amount of funding will remain the same. Therefore, the annual average rate of increase used for the State in the forecast was 0.0%. After the 2010 Census, the amount of funding that went to KAT increased by slightly more than $1.0 million. After each decade of 2020 and 2030, an additional $1.0 million was added to the State's allocation to KAT because the TPO's population forecast shows similar projected growth.

**FTA Funding** – Table Three shows the amount of FTA funding that comes to the Knoxville urban area. The FTA allows Section 5307 funding to be used to help offset certain maintenance costs and KAT uses this offset. The federal allocation has seen an annual average increase of 8.79% from 2000 to 2015. Locally, the way the FTA funding is divided was changed in 2013. Now, a portion of the Section 5307 funding is shared with other providers in the urban area. KAT receives 81% of the funding. For the TFCA it was assumed this would continue to hold true. The Section 5307 grant also uses urban area population as part of the formula to determine funding. For FY 2014, the urban area saw an approximate $1.0 million increase due to the population growth last decade. Federal funding is very hard to predict. The transportation acts that cover FTA funding are usually for 3-5 years and funding must be approved each year by Congress. To remain conservative, the TPO is using a 4.0% growth rate with an additional increase of $600,000 in 2024 and 2034 because the urban area population is projected to continue to increase over the life of the Mobility Plan.

**Table N-3:** Snapshot Of FTA Grant Funding - Knoxville Urban Area Allocations

| Federal Fiscal Year | Section 5307 Urban Area Funding | Section 5339 Bus & Bus Facilities | FTA Section 5310 Enhanced Mobility |
|---|---|---|---|
| 2016 | $6,204,025 | $610,092 | $541,437 |
| 2015 | $6,358,453 | $696,105 | $528,532 |
| 2014 | $5,627,964 | $603,709 | $529,470 |
| 2013 | $5,458,919 | $585,386 | $444,386 |
| 2012 | $4,816,582 | | |
| 2011 | $4,823,164 | | |
| 2010 | $4,292,343 | | |
| 2009 | $4,374,002 | | |

**Fares** – From 2000 to 2015, fare revenue increased annually by 5.87%. Over the last five years, fare revenue fell annually by 6.15%. The decreasing fare revenue is an anomaly and was impacted by several free-fare programs and the way the City of Knoxville accounted for the revenue from the University of Tennessee services, which ended in 2013. To remain conservative, an annual increase of 3.0% is used for the analysis.

**Other Funding Sources** – This category reflects revenue collected through other programs and grants, including the subcontracting of special services. During the period of 2000 to 2008 the other funding sources category increased by an annual rate of 10.49% a year. Recent changes in the Federal requirements associated with subcontracting has curtailed KAT's opportunities, makes predicting revenue difficult. The last time KAT showed any revenue in this category was $43,000 in 2012. Therefore, to be conservative in the TFCA this source is zeroed out. Any funding posted in this revenue source would be considered a bonus or a contingency amount.

## KAT Financial Forecast

KAT's expenses and revenues were forecasted over the Mobility Plan's time frame. Table Four is a summary of that information and highlights the Mobility Plan's Horizon Years.

**Table N-4:** KAT Projected Expenses & Revenues (Year of Expenditure)

| Category | Mobility Plan Horizon Years | | | | | |
|---|---|---|---|---|---|---|
| | **2017** | **2022** | **2026** | **2030** | **2034** | **2040** |
| Total Expenses | $19,483,955 | $22,587,244 | $25,422,142 | $28,612,844 | $32,204,008 | $38,453,270 |
| **Revenues** | | | | | | |
| City of Knoxville | $9,290,105 | $10,008,082 | $10,622,213 | $11,274,030 | $11,965,845 | $13,083,972 |
| State of Tennessee | $3,113,900 | $4,113,900 | $4,113,900 | $4,113,900 | $5,113,900 | $5,113,900 |
| FTA | $5,290,793 | $6,929,058 | $8,106,018 | $9,482,894 | $11,625,792 | $14,710,336 |
| Fares | $2,390,211 | $2,770,909 | $3,118,683 | $3,510,105 | $3,950,654 | $4,717,288 |
| Other Funding Sources | $0 | $0 | $0 | $0 | $0 | $0 |
| Total Revenue | $20,085,009 | $23,821,949 | $25,960,814 | $28,380,930 | $32,656,191 | $37,625,496 |
| % Difference Expenses/Revenue | +3.1% | +5.5% | +2.1% | -0.08% | +1.4% | -2.2% |

It is projected that KAT's budget would increase from $19.5 million in 2017 to $38.5 million by the last year of the Mobility Plan (2040). The percent difference in projected expenses and revenues was also calculated. It was a goal to not let revenues fall less than 3% of expenses. . Based on this analysis, KAT should be able to meet its future operating expenses.

The TFCA assumes no new transit service. Several studies have called for expanded transit services. For new services to occur in the urban area, other funding sources will be required.

As part of the TFCA, considerations was given on how KAT would handle a significant fiscal crisis. Since KAT operates on a "zero balance" budget, they are not able to save any overages for emergency purposes. Under a hypothetical scenario where an existing funding source saw a significant cut, the following options would be considered each with a varying degree of probability of being implemented:

1. A corresponding increase from another existing funding source;
2. Identification of a new public funding source or grant to offset the decrease;
3. Coordination efforts with another area transit provider;
4. Implementation of a tax of fee to fund transit;
5. Identification of a private/public partnership;
6. Subcontracting of services to reduce operating cost;
7. Fare increase, and
8. Service reduction.

KAT and the City of Knoxville have historically handled budget problems by controlling expenses, fighting for increases in revenues, and striving for service efficiencies. While unpredictable crises can occur, KAT has been able to maintain a fairly predictable and stable budget.

## KAT Vehicle Replacement Needs

Fleet maintenance is critical for effective transit service. KAT has four main types of vehicles:

- Large buses for regular, main line, fixed route service
- Neighborhood Service (NS) Vehicles to handle narrower streets and curb radii
- Trolleys throughout downtown Knoxville
- Lift-equipped paratransit vans for demand-response ADA paratransit services

The current unit cost was established for each type of vehicle based on recent purchases and the forecast was based on a 2.5% annual increase.

**Table N-5:** KAT Vehicle Unit Cost Summarized (2017-2040)

| Horizon Year | Bus | NS Vehicle | Trolley | Lift Van |
|---|---|---|---|---|
| 2017 | $717,500 | $125,841 | $766,100 | $63,550 |
| 2022 | $811,775 | $142,378 | $866,722 | $71,901 |
| 2026 | $896,059 | $157,158 | $956,754 | $79,365 |
| 2030 | $989,082 | $173,473 | $1,056,077 | $87,604 |
| 2034 | $1,091,761 | $191,482 | $1,165,712 | $96,699 |
| 2040 | $1,266,108 | $222,060 | $1,351,868 | $112,141 |
| Note: Vehicle cost inflated 2.5% annually | | | | |

Larger buses and trolleys have a FTA service life expectancy of 12 years and/or 500,000 miles. NS Vehicles and Lift vans have a FTA service life expectancy of 5 years and/or 150,000 miles. Often vehicles are used past their service life expectancy, but this replacement plan follows FTA guidelines. Table N-6 shows the number of vehicles needed to maintain current service levels.

**Table N-6:** KAT Vehicle Needs Summarized (2017-2040)

| Horizon Year | Bus | NS Vehicle | Trolley | Lift Van |
|---|---|---|---|---|
| 2017 | 0 | 0 | 0 | 5 |
| 2022 | 10 | 6 | 6 | 13 |
| 2026 | 27 | 6 | 4 | 18 |
| 2030 | 16 | 6 | 0 | 11 |
| 2034 | 13 | 6 | 6 | 7 |
| 2040 | 31 | 12 | 4 | 18 |
| **Total Units** | **97** | **36** | **20** | **72** |

Over the course of the Mobility Plan, KAT would need to purchase 97 buses, 36 NS Vehicles, 20 trolleys, and 72 Lift vans, totaling $129 million for replacement vehicles. The FTA would provide 80%, or $103.1 million. TDOT typically provides half (10%) of the local match ($12.9 million). An additional $12.9 million would be needed from the City of Knoxville for the other half of the local match required.

**Section 5307 funding** - FTA has a variety of grants that can be used for vehicle purchases, however, they are limited in how much can go toward vehicle replacement.

**Section 5339 funding** - KAT relies on Section 5307 funding for maintenance. Therefore, very little could be used for vehicles.

**Local Surface Transportation Program (STP)** - The entire urban area only receives approximately $600,000/yr, of which KAT typically receives the majority.

**Congestion Mitigation and Air Quality Improvement grants** - These are the same funds that are used for most large transportation projects in our planning area, so it's very competitive and not guaranteed for transit vehicles.

**Other** - CMAQ is a competitive grant statewide, and is not available each year. Also, as newer vehicles have modern clean air technology, fewer are eligible for replacement through CMAQ.

TDOT does receive other FTA funding that may be available for KAT. Most of TDOT's federal dollars are targeted towards the rural areas. But, from time-to-time, when a surplus occurs, those funds can be designated to the urban area if a need exists. It is recommended KAT monitor this possibility.

**Table N-7:** KAT Vehicle Replacement Funding Needs (2017-2040) (Year of Expenditure)

| Horizon Years | Bus | NS Vehicle | Trolley | Lift Van | Total |
|---|---|---|---|---|---|
| 2017 | $0 | $0 | $0 | $317,750 | $317,750 |
| 2022 | $7,696,538 | $793,270 | $4,950,035 | $858,203 | $14,298,047 |
| 2026 | $23,227,592 | $897,512 | $3,642,609 | $1,363,745 | $29,131,458 |
| 2030 | $14,833,140 | $966,523 | $0 | $952,965 | $16,752,627 |
| 2034 | $13,383,542 | $1,093,532 | $6,657,247 | $628,561 | $21,762,883 |
| 2040 | $37,408,105 | $2,509,976 | $4,898,904 | $1,834,085 | $46,651,071 |
| **Total Expenses** | **$96,548,918** | **$6,260,813** | **$20,148,795** | **$5,955,310** | **$128,913,836** |
| **Revenues** | | | | | |
| Federal | $77,239,134 | $5,008,651 | $16,119,036 | $4,764,248 | $103,131,069 |
| State | $9,654,892 | $626,081 | $2,014,880 | $595,531 | $12,891,384 |
| Local | $9,654,892 | $626,081 | $2,014,880 | $595,531 | $12,891,384 |
| **Total Revenues** | **$96,548,918** | **$6,260,813** | **$20,148,795** | **$5,955,310** | **$128,913,836** |
| % Difference Expenses/Revenue | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Average Per Year | $4,022,872 | $260,867 | $839,533 | $248,138 | $5,371,410 |

Based on funding secured over the last few years, KAT should be able to meet their vehicle needs over the next 10 years. Forecasting out 20 years is a much more difficult task. Changes in federal funding programs make it hard to plan. If a dedicated source of funding could be established either statewide or regionally, it would help provide fiscal security for transit.

## Vehicle Needs for Other Urban Area Transit Providers

Knox County CAC Transit and the East Tennessee Human Resource Agency (ETHRA) provide public demand response transit services in the urban area. Knox County CAC Transit also operates the Volunteer Assisted Transportation (VAT) program for seniors and individuals who require assistance from an escort during the entire trip, not just from door to door. All of these programs utilize FTA funding, so their vehicle replacement needs are part of the Mobility Plan. Knox County CAC Transit mainly uses 17-passenger paratransit vans. The VAT program utilizes both sedans and accessible mini-vans. ETHRA mainly uses an 11-passenger paratransit van.

**Table N-8:** Regional Transit Providers - Vehicle Unit Cost Summarized (2017-2040)

| Horizon Year | CAC Paratransit Van | VAT Mini-Van | VAT Sedan | ETHRA Paratransit Van |
|---|---|---|---|---|
| 2017 | $63,550 | $32,000 | $24,000 | $47,500 |
| 2022 | $71,901 | $36,205 | $27,154 | $51,705 |
| 2026 | $79,365 | $39,964 | $29,973 | $57,073 |
| 2030 | $87,604 | $44,112 | $33,084 | $62,998 |
| 2034 | $96,699 | $48,692 | $36,519 | $69,538 |
| 2040 | $112,141 | $56,486 | $42,351 | $80,643 |
| Note: Vehicle cost inflated 2.5% annually | | | | |

The TPO staff worked with each agency to prepare a vehicle replacement plan. For paratransit vans, mini-vans, and sedans the FTA service life expectancy is 5 years and/or 150,000 miles. Each agency's replacement needs were forecasted over the life of the Mobility Plan. Knox County CAC Transit will need 192 paratransit vans, 15 VAT mini-vans, and 56 VAT sedans and ETHRA will require 73 paratransit vans. This projection is based on maintaining today's service levels and does not take into consideration any future expansion.

**Table N-9:** Other Urban Area Transit Providers - Number of Replacement Vehicles Needed Summarized (2017-2040)

| Horizon Year | CAC Paratransit Van | VAT Mini-Vans | VAT Sedans | ETHRA Paratransit Vans |
|---|---|---|---|---|
| 2017 | 8 | 0 | 2 | 3 |
| 2022 | 40 | 3 | 12 | 16 |
| 2026 | 32 | 3 | 10 | 10 |
| 2030 | 32 | 3 | 8 | 12 |
| 2034 | 32 | 3 | 10 | 13 |
| 2040 | 48 | 3 | 14 | 19 |
| **Total Units** | **192** | **15** | **56** | **73** |

The combined cost for both agencies is $23.4 million through 2040. For Knox County CAC Transit, $16.4 million is needed for the demand response vehicles and $2.5 million for the VAT program. ETHRA would require $4.5 million for vehicle replacement. ETHRA also serves the Lakeway urbanized area and the rural portions of 16 counties in East Tennessee. This replacement plan is solely for replacing ETHRA vehicles that are used in the Knoxville urbanized area. Of the total amount of funding needed for all programs, $18.7 million (80%) would come from FTA, $2.3 million (10%) from TDOT match, and

$2.3 million (10%) from local matching sources. Traditional federal sources of funding include Section 5307, Section 5339, Section 5310, and local Surface Transportation Program (STP) funds.

**Table N-10:** Regional Transit Providers - Vehicle Replacement Funding Needs (2017-2040) (Year of Expenditure)

| Horizon Years | CAC Paratransit Van | VAT Mini-Van | VAT Sedan | ETHRA Paratransit Van | Total |
|---|---|---|---|---|---|
| 2017 | $508,400 | $0 | $48,000 | $137,100 | $693,500 |
| 2022 | $2,739,125 | $100,860 | $311,594 | $792,886 | $3,944,466 |
| 2026 | $2,448,274 | $114,114 | $291,096 | $546,079 | $3,399,563 |
| 2030 | $2,702,436 | $129,109 | $255,147 | $728,765 | $3,815,458 |
| 2034 | $2,982,984 | $146,075 | $349,458 | $870,607 | $4,349,124 |
| 2040 | $5,065,031 | $165,271 | $554,944 | $1,440,769 | $7,226,016 |
| **Total Expenses** | **$16,446,251** | **$655,429** | **$1,810,240** | **$4,516,207** | **$23,428,127** |
| **Revenues** | | | | | |
| Federal | $13,157,001 | $524,343 | $1,448,192 | $3,612,966 | $18,742,502 |
| State | $1,644,625 | $65,543 | $181,024 | $451,621 | $2,342,813 |
| Local | $1,644,625 | $65,543 | $181,024 | $451,621 | $2,342,813 |
| Total Revenue | $16,446,251 | $655,429 | $1,810,240 | $4,516,207 | $23,428,127 |
| % Difference Expenses/Revenue | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Average Per Year | $685,260 | $27,310 | $75,427 | $188,175 | $976,172 |

## Funding Needs For Urban Area Non-Profits

Large urban areas, like Knoxville, receive their own allocation of Section 5310 (Enhanced Mobility of Seniors & Individuals with Disabilities) funding. This change occurred under MAP-21. Agencies located in the Knoxville urban area must apply for funding through the TPO (instead of from TDOT as it was in the past). At least 55% of the funds must be used on capital projects, while the remaining 45% may be used for operating projects. The TPO administers a project selection process that involves an open call-for-projects from non-profits, governmental agencies, and private operators. All projects funded are in keeping with the Human Services Transportation Coordination Plan and approved by FTA.

In FY 2016, the TPO received $541,437 to distribute. The TPO has funded a variety of projects, including: Knox Count CAC VAT Program, Blount County Community Action Agency (BAA) Senior Miles (SMiles) program, and mobility management by ETHRA. In FY 2015, funding was awarded to six different agencies or non-profits, allowing them to purchase 10 vehicles to transport elderly or disabled passengers. It is projected that these types of projects will be continued as long as the Section 5310 program funds come to the urban area.

The FTA funds 80 percent of the cost of vehicles with a local match required of 20 percent. FTA funds operating projects at 50 percent with an equal amount of local match required. The TDOT has typically provided half of the local match. For vehicle purchases it is assumed that TDOT will continue to provide half of the match. However, for operating projects, TDOT provided notice that there is no longer a guarantee of them providing half the local match and awards will be determined based on both project merit and overall state funding availability. This could be a difficulty for the agencies that are using Section 5310 funding for operations, like the volunteer assisted driver programs offered by Knox County CAC VAT and the Blount County CAA SMiles.

# APPENDIX O
# PRIORITY POPULATIONS

The information below includes data sources, calculations and scoring of indicators used to develop the Priority Population data referenced on page 66.

## A. INDICATORS

Priority Populations are based on our effort to measure the location and extent of challenges to accessible quality food, physical activity centers, and chronic disease prevention necessitated the use of additional measures to provide a more detailed picture of need in our region.

Twenty-two socioeconomic measures, or indicators, were chosen to represent components of Priority Populations. Data for each indicator were assembled at census tract geography to represent neighborhoods and small communities throughout the region. The 22 indicators were organized into three themes: Opportunity, Accessibility, and Vulnerability.

### 1. Opportunity

Income and education measures comprise the Opportunity theme of the Priority Populations definition used in this analysis. Ten indicators were selected:

#### Population in poverty

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of population for whom poverty status has been determined, living below poverty.

#### Household income

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Median household income (dollars).

#### Households with public assistance income

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of households with cash public assistance or Food Stamps/SNAP benefits.

## Access to living-wage jobs

Source: U.S. Census Bureau, LODES 6.1, 2013.

Measure: Number of jobs earning more than $3,333 per month in census tracts. Income threshold for living wage based on Massachusetts Institute of Technology Living Wage Calculator: average family of 2 adults and 1 child in the Knoxville metropolitan area must earn at least $36,358 per year ($3,029 per month) to meet the living wage threshold. Closest LODES 6.1 income category was the >$3,333 category.

## Unemployment rate

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of population 16 years of age and older in the civilian workforce, currently unemployed.

## Housing plus transportation costs

Source: Center for Neighborhood Technology, 2013.

Measure: Percentage of household income spent on housing and transportation costs. Housing locations that require more than 45 percent of income spent on housing and transportation are considered unaffordable.

## Elementary school children eligible for free/reduced price lunch

Source: Tennessee Department of Education, Report Card, 2013.

Measure: Percentage of public elementary school children eligible for free or reduced price lunch.

## Adults without high school education

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of population 25 years of age and older without a high school education.

## College-age population enrolled in college

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of population 15-24 years of age enrolled in college or graduate school.

## Preschool-age population enrolled in preschool

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of population 3 and 4 years of age enrolled in preschool.

# 2. Accessibility

Measures related to infrastructure and the built-environment comprise the Accessibility theme of the Priority Populations definition used in this analysis. Six indicators were selected:

## Access to physical activity centers

Source: Knoxville/Knox County Metropolitan Planning Commission.

Measure: Proximity to parks, recreation centers, greenways, and other similar facilities. Scoring method: (portion of census tract within a tenth of a mile of activity area * 5) + (portion of census tract within a quarter mile of activity area * 4) + (portion of census tract within a half mile of activity area * 3) + (portion of census tract within three-quarters of a mile of activity area * 2) + (portion of census tract within one mile of activity area * 1).

## Active transportation commuters

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of commuters (workers 16 years and over) walking or bicycling to work.

## Public transit commuters

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of commuters (workers 16 years and over) taking public transit to work.

## Households with no vehicles

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of households with no vehicles available.

## Modified Retail Food Environment Index (mRFEI)

Source: Centers for Disease Control and Prevention, 2011.

Measure: Out of the total number of food retailers considered healthy or less healthy in a census tract, the mRFEI represents the percentage that are healthy.

## Children with limited access to healthy food

Source: Derived by Knoxville/Knox County Metropolitan Planning Commission from CDC and ACS data.

Measure: Multiply standardized (z-score) mRFEI value by total population under 18 years of age to calculate weighted score for children's access to healthy food.

# 3. Vulnerability

Vulnerable populations were enumerated, with specific demographic measures in six categories:

## Persons with disabilities

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of civilian non-institutionalized population with a disability.

## Minority population

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of population that is non-White and/or Hispanic/Latino.

## Persons with limited English proficiency

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of population 5 years of age and over that speak English less than “very well.”

## Children

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of total population under 18 years of age.

## Seniors

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of total population 65 years of age and over.

## Single-parent households

Source: U.S. Census Bureau, 2008-2012 American Community Survey, 5-year estimates.

Measure: Percentage of family households comprised headed by single-parent with children under 18 years of age.

# B. STANDARDIZED DATA

Because there are many different units of measurement (percentages, dollars, counts, scores) across the 22 indicators, it was necessary to standardize the data to allow measurement of summary performance scores for each census tract within each of the three themes of Priority Population. This was done using standard scores, or z-scores. A z-score is the number of standard deviations an observed value is from its population mean.

Scores above the mean are positive, while those below are negative. Indicators that measure favorable conditions with higher positive values (e.g., college enrollment rate, household income) require no further adjustment. Those that are community stressors (e.g., unemployment rate, poverty) must be multiplied by -1 to convert values above the mean (high values in these instances are not favorable) to values below the mean.

# C. PRIORITY POPULATIONS

## 1. Priority Measures by Theme

Within each of the three themes, an average of the z-scores for the component indicators was calculated for each census tract. For example, the Opportunity theme is comprised of 10 indicators, or 10 sets of z-scores, for each census tract. Those 10 scores were averaged for each tract to comprise an overall Opportunity score for each tract.

Theme-specific priority scores were mapped by tract to demonstrate the geographic distribution of areas of need or "priority." For each theme-specific map, five levels of priority were shown, from Very High to Very Low. Each category includes 20 percent of the tracts. Accordingly, the Very High priority/need category includes the tracts scoring in the lowest 20 percent of theme-specific scores. The Very Low priority/need category includes the tracts that scored in the highest 20 percent of scores.

## 2. Comprehensive Priority Populations Measure

To tabulate a comprehensive Priority Populations measure, the average scores for each of the three themes were summed for each census tract. The lower the comprehensive score for a tract, the higher the priority of that tract.

The comprehensive measures were mapped by tract to demonstrate the geographic distribution of Priority Populations. Three levels of priority were shown on the map: Very High Priority, High Priority, and Moderate Priority. The Very High Priority category represents tracts faced with the greatest challenges in Opportunity, Accessibility, and Vulnerability, those falling in the lowest 20th percentile of overall score. The High Priority category includes tracts ranking in the 21 to 40 percent range of total scores, and the Moderate Priority tracts comprise the remainder.