

Appendix D – Transportation System Performance Report

INESSEE

Kingsport 2045 Long Range Transportation Plan

Kingsport Metropolitan Transportation Planning Organization

January 2022

Prepared for:

Kingsport Metropolitan Transportation Planning Organization



Prepared by:

AECOM

Copyright © 2022 by AECOM

All rights reserved. No part of this copyrighted work may be reproduced, distributed, or transmitted in any form or by any means without the prior written permission of AECOM.

Transportation System Performance Report

This appendix summarizes the status of performance-based planning and programming for the Kingsport Metropolitan Planning Area (MPA). It describes how the MTPO, and specifically the 2045 LRTP, supports progress toward achieving the TDOT and VDOT statewide performance targets, and ultimately supports national transportation goals and performance measures.

Transportation Performance Management

With the passage of the Moving Ahead for Progress in the 21st Century Act (MAP-21), and continuing as part of the FAST Act, Congress established Transportation Performance Management (TPM). Federal Highway Administration (FHWA) defines TPM as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Another requirement is Performance Based Planning and Programming (PBPP), which impacts the development of the 2045 LRTP, as well as being incorporated into the Kingsport MTPO Transportation Improvement Program (TIP) process. PBPP refers to the application of performance management principles within the planning and programming processes of transportation agencies to achieve desired performance outcomes for the multimodal transportation system.

Transportation performance measures and targets describe how well the transportation system is functioning in quantitative terms and establishes future targets for system performance based on recent trends and calculated values. According to FHWA, TPM represents the opportunity to prioritize needs and align resources for optimizing system performance in a collaborative manner.

States and Metropolitan Transportation Planning Organizations (MTPOs) are required to incorporate FHWA and Federal Transit Administration (FTA) performance measures and targets into their planning practices. MTPOs may choose to support statewide targets set by the state or set its own, along with assuming the responsibility of achieving them. Kingsport, as a bi-state MTPO, has adopted the statewide targets established by VDOT and TDOT, and is committed to working with local, State, and federal partners to implement a performance-based decision-making process consistent with FAST Act performance measures.

Federal Highway Performance Goals

FAST Act includes seven national goal areas and requires State DOTs and MPOs to develop a performance-based approach to support the national goals. As part of this process, USDOT in consultation with state DOTs, MPOs, and other stakeholders establish performance measures corresponding to the national goals. State DOTs and MPOs are allowed to identify additional measures, but all statewide transportation plans and LRTPs must then address the performance measures and targets associated with those measures, at a minimum. Moreover, state DOTs, MPOs, and public transportation service providers are required to establish performance targets and to coordinate development of these targets to ensure consistency. **Table 1** displays national goals and performance measures are essented areas. **Table 2** displays MAP-21/FAST Act Performance Measures as established in 23 CFR 490 (National Performance Management Measures) and 49 USC 625 (transit asset).

Table 1. National Federal Highway Program Performance Goals

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 & Economic Vitality

 To improve the national freight highway 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.

Source: 23 USC 150: National goals and performance management measures.

Table 2. National Federal Highway Program Performance Goals

| Safety (PM 1) | Infrastructure (PM 2) | System Performance (PM 3) | Transit | | |
|---|--|---|---|--|--|
| Number of fatalities | Percentage of pavement of the Interstate System in Good condition | Interstate Travel Time Reliability Measure: Percent of person-miles traveled on the Interstate that are reliable | Rolling Stock: The percentage of revenue vehicles (by type) that exceed the useful life benchmark (ULB). | | |
| Fatalities per 100 million vehicle miles traveled | Percentage of pavement of the Interstate System in Poor condition | Non-Interstate Travel Time Reliability Measure: Percent of person- miles traveled on the non-Interstate NHS that are reliable | • Equipment: The percentage of non- revenue service vehicles (by type) that exceed the ULB. | | |
| Number of serious injuries | Percentage of pavement of the non-Interstate NHS in Good condition | Freight Reliability Measure: Truck Travel Time Reliability (TTTR) Index | • Facilities: The percentage of facilities (by group) that are rated less than 3.0 on the Transit Economic Requirements Model (TERM) Scale. | | |
| Serious injuries per 100 million vehicle miles traveled | Percentage of pavement of the non-Interstate NHS in Poor condition | Congestion Reduction (CMAQ measures and targets do not apply as SLATS is not in a non-attainment area for air pollution) | Infrastructure: The percentage of track segments (by mode) that have performance restrictions. (not applicable to SLATS) | | |
| Number of non-motorized fatalities and non-motorized serious injuries | Percentage of NHS bridges classified as in Good condition | | • Safety Targets: Fatalities (number and rate per 100,000 VRM); Injuries (number and rate per 100,000 VRM); Safety Events (number and rate per 100,000 VRM); and, System Reliability (failures/VRM) | | |
| | • Percentage of NHS bridges classified as in Poor condition | | | | |

Source: 23 CFR 490 (National Performance Management Measures) and 49 USC 625 (transit asset).

Kingsport MTPO Performance Measures

The following discusses the current status of the Kingsport MTPO performance measures and compliance with the performance target setting. Each section includes a discussion of how the LRTP projects/policies help move the Kingsport region in a positive direction toward achieving the approved targets.

Safety (PM 1)

On March 15, 2016 the USDOT published the final rule for the National Performance Management Measures: Highway Safety Improvement Program (23 CFR Part 490). The rulemaking defined the following national safety performance measures (PM 1) for all public roads.

- Total number of traffic related fatalities.
- Rate of traffic related fatalities per 100 million VMT (Vehicle Miles Traveled).
- Total number of traffic related serious injuries.
- Rate of traffic related serious injuries per 100 million VMT.
- Total number of non-motorized fatalities and serious injuries.

Safety performance targets are updated annually as part of the State DOT's Highway Safety Improvement Program (HSIP) report and subsequently endorsed by the MPO. Safety performance targets that have been established by VDOT and TDOT are summarized in **Table 3**. Current targets are for calendar year 2021, with 2019 and 2020 targets provided as reference. **Figures 1** to **5** display the 2019 to 2021 targets by state.

| | <u>Baseline</u> | | <u>2021 ⁻</u> | Target |
|---|-----------------|--------|--------------------------|--------|
| HSIP Performance Measures | TDOT | VDOT | TDOT | VDOT |
| Number of fatalities | 1039.8 | 827 | 1078.8 | 852.0 |
| Rate of fatalities (per 100 million vehicle miles traveled) | 1.302 | 0.95 | 1.355 | 0.984 |
| Number of serious injuries | 6725.8 | 7182.0 | 6227.1 | 7451.0 |
| Rate of serious injuries (per 100 million vehicle miles traveled) | 8.462 | 8.161 | 8.394 | 8.325 |
| Number of non-motorized fatalities and non-motorized serious injuries | 511.4 | 704.0 | 521.0 | 531.0 |

Table 3. National Federal Highway Program Performance Goals

Source: TDOT and VDOT.

Kingsport MTPO has adopted the TDOT and VDOT¹ targets and to the extent practicable, the Kingsport MTPO is committed to coordinating with the DOTs to integrate each State's safety goals, objectives, and plans into the on-going MTPO planning process. This is primarily achieved by aligning investment priorities in the TIP with projects that have the potential to reduce crash rates, improve pedestrian safety,

¹ The Kingsport MTPO does not adopt the VDOT numerical targets. Instead, the MTPO adopts a statewide percentage that VDOT calculates. That percentage is then applied to the Virginia portion of the Kingsport Metropolitan Planning Area (MPA) to identify specific targets.

and enhance safety design. By supporting VDOT and TDOT safety performance targets, the Kingsport MTPO agrees to:

- Work with the States to address areas of concern for fatalities or serious injuries within the MPA.
- Coordinate with the State DOTs to mutually develop and share available data related to safety performance measures.
- Plan and program projects so they contribute toward achieving the safety performance targets.

Figure 1. Number of Fatalities



Figure 2. Number of Serious Injuries

1.600 1.355 1.400 1.302 1.200 0 984 0.950 1.000 0.800 0.600 0.400 0.200 0.000 Baseline 2021 Target VDOT TDOT

Figure 1. Rate of Fatalities (per 100 million vehicles miles traveled)

Figure 4. Rate of Serious Injuries (per 100 million vehicle miles traveled)



Figure 5. Number of Non-Motorized Fatalities and Serious Injuries





Safety targets are updated annually by VDOT and TDOT, and Kingsport MTPO must adopt, or modify, the targets within 180 days, and incorporate those updates into the TIP as needed. The 2021 Safety targets were adopted in February 2020 and incorporated in the 2021 TIP. It is anticipated that the 2022 safety targets will be reviewed/addressed in February 2022.

Progress/Opportunities Toward Reaching PM 1 Targets

The MTPO prioritizes safety in all transportation planning elements and the 2045 LRTP identified safety as a top priority throughout the Kingsport MPA. The performance based planning process, used for the 2045 LRTP project scoring, assigns 25 out of 100 possible points to safety. This is the highest point total among the six categories that are used to score each LRTP potential project.

The Kingsport MTPO is also in the process of starting a Local Road Safety Plan (LRSP) study that will identify, analyze, and prioritize roadway safety improvements on roadways within the Kingsport MPA. The purpose of the LRSP is to prioritize a list of issues, risks, actions, and improvements that can be used to reduce fatalities and serious injuries on local roads. As part of a project kickoff meeting (December 2021), the study team, which included representatives from FHWA, agreed to expand the focus of the analysis to include State roads. This effort should significantly help the MTPO address safety concerns within the region.

Another safety related improvement will be the addition of ITS enhancements along I-81 (ITS Smartway Expansion) from I-26 (Exit 57) interchange to near I-381 just across the Virginia state line. This improvement was documented in a TDOT *I-40/81 Multimodal Corridor Study* completed in July 2020. The project will include the installation of ITS applications such speed cameras, dynamic message signs (DMS), CCTV systems, and other wired and wireless communications-based and electronics technologies. The completion of this stretch of I-81 will eliminate a significant gap that currently exists and will help improve safety for the traveling public.

Truck climbing lanes are also being planned as part of the 2045 LRTP. The climbing lanes will provide a space for slower-moving vehicles to continue traveling while freeing the remaining travel lanes for other motorists to use at normal speeds. The LRTP identifies two areas for truck climbing lanes within the Kingsport MPA. One is located along the western edge of the Kingsport MPA on I-81 (northbound) and the second is located along I-26 (eastbound beginning at SR 93). The implementation of these facilities would enhance safety, improve traffic flow, and better accommodate heavy truck traffic that is so critical to local industries.

The MTPO also supports on-going studies by VDOT, as part of the *Project Pipeline* study, to address potential safety concerns along the US 23 corridor in the Virginia portion of the Kingsport MPA. This study has already identified several safety concerns and additional studies will help identify specific projects that will be eventually programmed in future LRTP updates.

Finally, at the time of the LRTP update, the MTPO was in the process of completing the *Kingsport MTPO Regional Bicycle and Pedestrian Plan*. This plan included both a bicycle and pedestrian Level of Traffic Stress (LTS) analysis and included recommend improvements to expand and enhance non-motorized connections within the Kingsport MPA. The development of this plan further demonstrates the MTPO commitment to creating a transportation network that is safe for all transportation users.

Infrastructure Condition (PM 2)

On January 18, 2017 the USDOT published the final rule for the National Performance Management Measures: Infrastructure Condition and System Performance (23 CFR Part 490). The rulemaking defined the following infrastructure condition performance measures for the NHS.

- Percentage of pavement of the Interstate System in Good condition
- Percentage of pavement of the Interstate System in Poor condition
- Percentage of pavement of the non-Interstate NHS in Good condition

- Percentage of pavement of the non-Interstate NHS in Poor condition
- Percentage of NHS bridges classified as in Good condition
- Percentage of NHS bridges classified as in Poor condition

PM2 targets for Virginia and Tennessee related to NHS Pavement and Bridge Conditions were established by VDOT and TDOT in 2018. MTPOs were subsequently required to establish 4-year targets for each of the six performance measures by either agreeing to plan and program projects so that they contribute to the accomplishment of the State's PM2 targets or commit to quantifiable PM2 targets for the MPA. Kingsport MTPO agreed to plan and program projects so that they contribute toward the accomplishment of VDOT's 4-year PM2 targets in 2018. **Table 5** summarizes the current PM2 measures and targets Kingsport MTPO adopted for each State.

| Table 4. | PM | Infrastructure | Condition | Targets |
|----------|----|----------------|------------|---------|
| | | in a du a du a | 0011011011 | 1019010 |

| | TDOT | TDOT | VDOT | VDOT |
|--|----------|----------------------------|----------|----------------------------|
| Measure | Baseline | 4-Year Target (2021) | Baseline | 4-Year Target (2021) |
| Interstate – Percentage pavements in "Good" condition | N/A | 60% | N/A | 45% |
| Interstate – Percentage pavements in "Poor" condition | N/A | 1% | N/A | 3% |
| Non-Interstate NHS – Percentage pavements in "Good" condition | 72.7% | 40% | 54.5% | 25% |
| Non-Interstate NHS – Percentage pavements in "Poor" condition | 6.7% | 5% | 9.1% | 5% |
| Percentage of NHS bridges by deck area in "Good" condition | 39.5% | 36% | 33.6% | 30.5% |
| Percentage of NHS bridges by deck area in "Poor" condition | 3.5% | 6.0% | 3.5% | 3% |

Source: TDOT and VDOT.

Progress/Opportunities Toward Reaching PM 2 Targets

One of the established goals for the 2045 LRTP was to support economic development within the Kingsport MPA. In support of this effort, an economic development workshop was held in Spring 2021 to discuss opportunities to advance this goal. One of the key findings from this meeting that stakeholders included was that providing for safety and maintenance of existing facilities should be a primary focus of future year transportation investments. While new transportation facilities can be key drivers to encourage economic activity, stakeholder feedback repeatedly affirmed that enhancing safety and maintenance on key portions of existing infrastructure was the most critical transportation investment to be made to support economic development. Furthermore, stakeholders indicated that if existing pavement and bridges are not maintained that they can potentially become a safety concern.

The Kingsport MPA includes some IMPROVE Act bridge projects and in November 2021, Congress passed the Infrastructure Investment and Jobs Act (IIJA). The IIJA focuses on rebuilding roads, bridges and rails, expanding access to clean drinking water, ensuring increased access to high-speed internet, addressing climate change, advancing environmental justice initiatives, and strengthening the supply chain through investments in ports and airports. The legislation also reauthorizes surface transportation programs for five years and invests \$110 billion in additional funding to repair roads and bridges and support major, transformational projects. The legislation also includes the first ever Safe Streets and Roads for All program to support projects to reduce traffic fatalities.

Federal Highway Administration (FHWA) announced in December 2021 that the IIJA would provide \$52.5 billion in funding to all 50 states and the District of Columbia for FY 2022. This represents an increase of more than 20% as compared to FY 2021 for Federal-aid Highway Program apportionments. While specific amounts have not been identified at the time of this plan development, it is anticipated that the

Kingsport MTPO could see some of this additional funding which could be used to accelerate some ongoing maintenance projects within the region.

Infrastructure Condition (PM 3)

On January 18, 2017 the USDOT published the final rule for the National Performance Management Measures: Infrastructure Condition and System Performance (23 CFR Part 490). The rulemaking defined the following System Reliability performance measures for the NHS.

- Interstate Travel Time Reliability Measure: Percent of person-miles traveled on the Interstate that are reliable
- Non-Interstate Travel Time Reliability Measure: Percent of person-miles traveled on the non-Interstate NHS that
 are reliable
- Freight Reliability Measure: Truck Travel Time Reliability (TTTR) Index
- Congestion Reduction: (CMAQ measures and targets do not apply as Kingsport MPO is not in a non-attainment area for air pollution)

The first set of PM3 targets for Virginia and Tennessee related to System Reliability were established by VDOT and TDOT in 2018. MTPOs were subsequently required to establish 4-year targets for each of the three required NHS PM3 performance measures by either agreeing to plan and program projects so that they contribute to the accomplishment of the State's PM3 target(s) or commit to quantifiable PM3 target(s) for the MPA. Kingsport MTPO agreed to plan and program projects so that they contribute toward the accomplishment of VDOT's 4-year PM3 target(s) in November 2018. The current PM3 measures and targets the Kingsport MTPO adopted per each State is summarized in **Table 6**.

Table 6. PM 3 System Reliability Condition Targets

| | TDOT | TDOT | VDOT | VDOT |
|---|----------|-------------------------|----------|----------------------------|
| Measure | Baseline | 4-Year Target (2021) | Baseline | 4-Year Target (2021) |
| Travel Reliability – Percent of person-miles traveled that are reliable on the Interstate | 87.7% | 83% | 84.3% | 82% |
| Travel Reliability – Percent of person-miles traveled that are reliable on the Non-Interstate NHS | N/A | 87.5% | N/A | 82.5% |
| Freight Reliability – Truck Travel Time Reliability Index on the Interstate | 1.35 | 1.37 | 1.48 | 1.56 |

Source: TDOT and VDOT.

Similar to PM2, most of the NHS routes within the Kingsport MPA are State Highways or Interstate highways and improvements are therefore determined in large part at the State level. By including State projects in the TIP that are expected to improve system reliability, the MTPO agrees to plan and program projects that contribute toward the accomplishments of each State's PM3 targets.

Progress/Opportunities Toward Reaching PM 3 Targets

Several of the factors that impact travel time reliability were already discussed under PM 1 (safety). Specifically, the installation of ITS applications along I-81 through the Kingsport MPA will not only help improve safety, but it can also help enhance overall traffic flow and operations. Furthermore, the programming of truck climbing lanes along I-81 and I-26 will also contribute to more reliable travel for the public, as well as the movement of goods.

Transit Asset Management Performance Measures

On July 26, 2016 the USDOT published the final rule for Transit Asset Management (49 CFR Part 625). The rulemaking defines a framework for transit agencies to monitor and manage public transportation assets. All recipients of FTA funds are required to develop Transit Asset Management (TAM) plans to provide a systematic process for procuring, maintaining, and replacing capital assets. A prerequisite to

the TAM process is the development of performance targets by transit agencies in reference to the State of Good Repair (SGR) for transit assets. The SGR is defined as the condition at which the capital asset is able to operate at a full level of performance and does not pose unacceptable safety risks for users. Assets are measured against the FTA Useful Life Benchmark (ULB), which is the expected life cycle for a particular asset. Performance measures are established for revenue vehicles, equipment, and transit facilities based on the following:

- Rolling Stock-percent of revenue vehicles that exceed the useful life benchmark.
- Equipment-percent of non-revenue vehicles that exceed the useful life benchmark.
- Facilities-percent of facilities below 3 on the Transit Economic Requirements Model Scale.
- Infrastructure-percent of track performance restrictions.

Beginning in 2018, Kingsport Area Transit Service (KATS) adopted their own TAM plan/targets. NET Trans and Mountain Empire Older Citizens (MEOC/MET) opted into each State's Group TAM process. The 2018 TAM Plans were completed by VDOT and TDOT and included 2019 performance management targets for rolling stock, equipment, facilities, and infrastructure on behalf of the transit agencies. The Kingsport MTPO adopted the TAM targets by resolution in September 2018, 2020. The current TAM measures/targets are summarized in **Table 7**.

The resolution to support the public transit providers TAM targets means that Kingsport MTPO agrees to plan and program projects for the MPA so that they contribute toward the accomplishment of the respective TAM targets. By agreeing to support the public transportation agencies TAM performance targets Kingsport MTPO will:

- Work with the local transit providers to develop strategies to prioritize investments.
- Coordinate with the State DOTs and public transit agencies to mutually develop and share available data related to TAM performance measures.
- Plan and program projects so they contribute toward achieving the TAM performance targets.

Table 7. Transit Asset Management Targets

Tennessee KATS

| Facilities – Percent Rated Below 3 on the Condition Scale | | | | | | |
|---|-------|-------|--|--|--|--|
| Performance Measure 2018 Target % 2019 Targe | | | | | | |
| Transit Station | 0% | 0% | | | | |
| Storage Facility | 0% | 0% | | | | |
| Trolley Barn | 0% | 0% | | | | |
| Rolling Stock - Percent of Revenue Vehicles that have Met or Exceeded their Useful Life Benchmarks | | | | | | |
| Performance Measure 2018 Target % 2019 Target % | | | | | | |
| Fixed Route | 0% | 0% | | | | |
| Demand Response | 37.5% | 12.5% | | | | |
| Staff Vehicles 0% 50% | | | | | | |

| Equipment – Service Vehicles - % of Non-Revenue Vehicles that have Met or Exceeded their Useful Life Benchmarks | | | | | | |
|--|----|----|--|--|--|--|
| Performance Measure 2018 Target % 2019 Target % | | | | | | |
| Non-Revenue/Service Automobile | 33 | 33 | | | | |
| Trucks and other Rubber Tire Vehicles | 29 | 29 | | | | |

Source: KATS

Tennessee NET Trans

| Rolling Stock - Percent of Revenue Vehicles that have Met or Exceeded their Useful Life Benchmarks | | | | | | |
|--|---------------|---------------|--|--|--|--|
| Performance Measure | 2018 Target % | 2019 Target % | | | | |
| Bus | <25% | <25% | | | | |
| Auto/Mini-Van <25% <25% | | | | | | |
| Van <25% <25% | | | | | | |
| Equipment – Service Vehicles - % of Non-Revenue Vehicles that have Met or Exceeded their Useful Life Benchmarks | | | | | | |

| Performance Measure | 2018 Target % | 2019 Target % | |
|---------------------|---------------|---------------|--|
| Mini-Van | <25% | <25% | |
| Auto/SUV | <25% | <25% | |

Source: TDOT Standards

Virginia MEOC/MET

| Facilities – Percent Rated Below 3 on the Condition Scale | | | | | | |
|---|-------|-----|--|--|--|--|
| Performance Measure 2018 Target % 2019 Target % | | | | | | |
| Administrative and | 1.00/ | 10% | | | | |
| Maintenance Facility | 10% | | | | | |
| Administrative Office | 10% | 10% | | | | |
| Maintenance Facility | 10% | 10% | | | | |
| Passenger Facilities | 10% | 10% | | | | |
| | | | | | | |

Rolling Stock - Percent of Revenue Vehicles that have Met or Exceeded their Useful Life Benchmarks

| Performance Measure | 2018 Target % | 2019 Target % |
|---------------------|---------------|---------------|
| Articulated Bus | 20% | 15% |
| Automobile | 10% | 10% |
| Cutaway | 10% | 10% |
| Minibus | 25% | 20% |
| Over-the-Road Bus | 20% | 15% |
| Trolley Bus | 10% | 10% |
| Van | 25% | 25% |

Source: MEOC/MET

Transit Safety Performance Measures

In July 2018, FTA published the Public Transportation Agency Safety Plan (PTASP) Final Rule, which requires certain operators of public transportation systems, such as KATS and NET Trans that receive federal funds under FTA's Urbanized Area Formula Grants to develop safety plans that include processes and procedures to implement Safety Management Systems (SMS). As part of the PTASP requirements, transit agencies set safety performance targets based on the following safety performance measures:

- Fatalities Total number of reportable fatalities and rate per total vehicle revenue miles.
- Injuries Total number of reportable injuries and rate per total vehicle revenue miles.
- Safety Events Total number of reportable events and rate per total vehicle revenue miles.
- System Reliability Mean distance between major mechanical failures. The NTD defines a major mechanical system failure as a failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or starting the next scheduled revenue trip because vehicle movement is limited or due to safety concerns.

The plan must include safety performance targets and transit operators also must certify they have a safety plan in place meeting the requirements of the rule. The plan must be updated and certified by the transit agency annually. KATS and NET Trans have adopted PTASP plans and safety targets for 2021. As required, Kingsport MTPO adopts the PTASP targets within 180 days following adoption by each transit agency, Kingsport LRTP adopted the targets in February 2021. The current targets are displayed in **Table 8**.

| Annual Safety Pe | Annual Safety Performance Targets (FY2021) | | | | | | |
|---|--|---|----------------------------|---|------------------------------------|--|--|
| Based on the safety | performance me | asures establishe | d under the No | tional Public T | ransit Safety F | Plan | |
| Mode of Service | Fatalities (total) | Fatalities (rate per 100,000 VRM) | Injuries (total) | Injuries (rate per 100,000 VRM) | Safety Events (total) | Safety Events (rate per 100,000 VRM) | System Reliability (failures/VRM) |
| TN Fixed Route (KATS) | 0 | 0 | 2 | 0.6 | 2 | 0.6 | 22,102 |
| TN Demand Response (FTHRA/NET Trans) | 0 | 0 | 4 | 0.17 | 3 | 0.13 | 262,162 |

Table 8. Transit Safety Targets

Source: KATS, NET Trans.

The current resolutions to support KATS and FTHRA/NET Trans safety targets effectively agrees to plan and program projects for so that they contribute toward the accomplishment of each transit agency's FY2021 PTASP Safety Targets(s) for the following performance measures:

- Fatalities Total number of reportable fatalities and rate per total vehicle revenue miles.
- Injuries Total number of reportable injuries and rate per total vehicle revenue miles.
- Safety Events Total number of reportable events and rate per total vehicle revenue miles.
- System Reliability Mean distance between major mechanical failures. The NTD defines a major mechanical system failure as a failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or starting the next scheduled revenue trip because vehicle movement is limited or due to safety concerns.

The overarching goal of the PTASP is to enhance all aspects of safety within the participating public transportation agency by guiding effective and proactive management of safety risks in their operations and prioritizing capital investments using performance-based planning. To the extent practicable, Kingsport MTPO will continue to coordinate with the State DOTs and local transit providers to integrate each agency's PTASP goals, objectives, and plans into the MTPO planning process. This includes linking investment priorities in the TIP toward projects that have the potential to effectively and proactively manage safety risks related to public transportation.