



APPENDIX D

**SYSTEM  
PERFORMANCE  
REPORT**

# BACKGROUND INFORMATION

The Federal Highway Administration (FHWA) defines Transportation Performance Management as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. In short, Transportation Performance Management:

- Is systematically applied, a regular ongoing process
- Provides key information to help decision makers to understand the consequences of investment decisions across transportation assets or modes
- Improves communications between decision makers, stakeholders, and the traveling public
- Ensures targets and measures are developed in cooperative partnerships and based on data and objective information

In 2015, using the Transportation Performance Management Framework, Congress established the seven Federal Performance Goals for the federal aid highway system, shown in figure D.1.

With direction from Congress, the U.S. Department of Transportation (USDOT) published rules in 2017 that identify specific processes and timetables for measuring and establishing targets for the performance of National Highway System (NHS) to meet the seven federal performance goals. These rules help FHWA, state DOTs, and Metropolitan Planning Organizations (MPO) to plan, program, and invest in transportation where its most needed, while increasing the transparency and accountability of investment of federal dollars. SRTC has nearly \$743 million in federal dollars programmed in the 2022–2025 Regional Transportation Improvement Program (RTIP).

Figure D.1: Federal Performance Goals (23 USC 150(B))

<b>1</b>	<b>Safety</b>	Achieve significant reduction in traffic fatalities and serious injuries on all public roads.
<b>2</b>	<b>Infrastructure Condition</b>	Maintain the highway infrastructure asset system in a state of good repair.
<b>3</b>	<b>Congestion Reduction</b>	Achieve a significant reduction in congestion on the National Highway System.
<b>4</b>	<b>System Reliability</b>	Improve the efficiency of the surface transportation system.
<b>5</b>	<b>Freight Movement and Economic Vitality</b>	Improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
<b>6</b>	<b>Environmental Sustainability</b>	Enhance the performance of the transportation system while protecting and enhancing the natural environment.
<b>7</b>	<b>Reduced Project Delivery Delays</b>	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 practice

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## PERFORMANCE MEASURE FRAMEWORK

USDOT published 21 different rules for national performance measures to be administered by the FHWA and FTA. The individual state DOTs are required to report their performance on each of the 21 national performance measures to the FHWA and FTA. The state DOTs coordinate with the MPOs to establish targets at the Metropolitan Planning Area (MPA) level that work toward state targets. However, not all 21 performance measures and targets apply to every MPO. SRTC is required to set and report on target attainment for the following performance measures:

### SAFETY

1. Number of fatalities on all roads
2. Fatalities per 100 million vehicle miles traveled (VMT) on all roads
3. Number of serious injuries on all roads
4. Serious injuries per 100 million VMT on all roads
5. Number of non-motorized fatalities and non-motorized serious injuries on all roads

### PAVEMENT CONDITION

6. Percent of Interstate pavement on the national highway system in good condition
7. Percent of Interstate pavement on the national highway system in poor condition
8. Percent of non-interstate pavement on the national highway system in good condition
9. Percent of non-interstate pavement on the national highway system in poor condition

### BRIDGE CONDITION

10. Percent of national highway system bridges classified in good condition (weighted by deck area)
11. Percent of national highway system bridges classified in poor condition (weighted by deck area)

### HIGHWAY SYSTEM RELIABILITY

12. Percent of person-miles traveled on the interstate national highway system that are reliable
13. Percent of person-miles traveled on the non-interstate national highway system that are reliable

### FREIGHT PERFORMANCE

14. Truck Travel Time Reliability Index

### CONGESTION MITIGATION AND AIR QUALITY PERFORMANCE

15. Carbon Monoxide kg/day
16. Particulate matter kg/day

### PUBLIC TRANSIT ASSET MANAGEMENT

17. Equipment: The percentage of non-revenue service vehicles (by type) that meets or exceeds the Useful Life Benchmark (ULB)
18. Rolling Stock: The percentage of revenue vehicles (by type) that meets or exceeds the ULB
19. Facilities: The percentage of facilities (by group) that are rated less than 3.0 on the Transit Economic Requirements Model (TERM) Scale6

### PUBLIC TRANSIT SAFETY

20. Reduce casualties and occurrences: Use a safety management systems framework to identify safety hazards, mitigate risk and reduce casualties and occurrences resulting from transit operations to meet or exceed the acceptable level of safety performance
21. Foster a robust safety culture: Foster Agency-wide support for transit safety by establishing a culture where managers are held

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22. Safe and reliable systems and equipment: Ensure that all vehicles, equipment, and facilities are regularly inspected, maintained, and serviced as needed.

The final performance rules give MPOs the option to either adopt their own performance targets, or to adopt targets developed by the state and transit providers. However, not all targets are achievable through MPO planning, programming, and investment. SRTC adopted Regional Transportation System Performance Targets, in the following ways:

1. SRTC by resolution 18-05 supported statewide targets for pavement condition, bridge condition, travel time reliability, freight reliability and air quality.
2. SRTC by resolution 19-01 supported statewide targets for measures related to safety and most recently reaffirmed on Dec 9, 2020.
3. SRTC agreed to support public transit asset management (TAM) and public transit safety targets as developed by Spokane Transit Authority through Board motions on June 14, 2018 and March 11, 2021 respectively.

Except for the measures pertaining to transit and safety, all measures apply only to roads in the National Highway System (NHS). The NHS is made up of designated principal arterials in accordance with federal and state criteria on functional classification.

For more information about performance-based planning and requirements please visit:

<https://www.fhwa.dot.gov/fldiv/tpm.cfm>

# SAFETY PERFORMANCE (STATEWIDE)

Effective April 14, 2016, the FHWA established five highway safety performance measures (23 CFR Part 490, Subpart B) to carry out the Highway Safety Improvement Program (HSIP). These performance measures are:

1. Number of fatalities on all roads
2. Fatalities per 100 million vehicle miles traveled (VMT) on all roads
3. Number of serious injuries on all roads
4. Serious injuries per 100 million VMT on all roads
5. Number of non-motorized fatalities and non-motorized serious injuries on all roads

WSDOT annually publishes statewide safety performance targets in the HSIP Annual Report that it transmits to FHWA each year. WSDOT adopts and annual statewide targets for all safety categories as zero fatalities and zero serious injuries—this is often referred to as “Target Zero.” In July 2021, WSDOT reaffirmed Target Zero provides the framework and trendlines for developing safety performance targets.

On May 9th, 2019 the SRTC Board signed a resolution to plan and program projects so that they contribute to the accomplishment of the statewide performance targets for safety. The new statewide targets for 2019 followed a five-year rolling average trendline instead of a target zero trendline, see Table 1. Most recently, the SRTC Executive Director reaffirmed SRTC’s support of the 2021 statewide targets in a letter submitted to WSDOT on Dec 9, 2020.

Both SRTC’s 2017 Metropolitan Transportation Plan (MTP) prioritization process and 2018 and 2021 call for project’s prioritization evaluated projects and programs for safety benefits and are examples of current efforts by SRTC to achieve Target Zero WSDOT’s statewide targets for each of the five measures, from 2018 through 2022, are shown in figure D.2. The figure report linked [HERE](#) for reference, provides Spokane County safety performance measure and targets. It was developed for informational purposes only.

- 2018 targets were adopted by the SRTC Board December 14, 2017
- 2019 targets were supported by SRTC Board Resolution on May 9, 2019
- 2020 targets were supported by letter from the SRTC Executive Director, Feb 5, 2020
- 2021 targets were supported by letter from the SRTC Executive Director, Dec 9, 2020

**Figure D.2: Statewide Safety Measures and Targets**

#	Measure	2018 Target	2019 Target	2020 Target	2021 Target	2022 Target
1	Number of fatalities on all public roads, annual 5-year rolling average	415.5	489.2	443.2	444.1	437.3
2	Number of fatalities per 100 million vehicle miles traveled (VMT) on all public roads, annual 5-year rolling average	0.709	0.813	0.732	0.724	0.730
3	Number of serious injuries on all public roads, annual 5-year rolling average	1,788	1,855	1,796	1,807	1819
4	Number of serious injuries per 100 million vehicle miles traveled (VMT) on all public roads, annual 5-year rolling average	3.058	3.068	2.968	2.944	3.042
5	Number of non-motorist fatalities and serious injuries on all public roads, annual 5-year rolling average	431.5	511.8	466.5	472.1	464.6

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## PAVEMENT PERFORMANCE (STATEWIDE)

Pavement performance measures are related to the percent of pavement on the state's National Highway System (NHS) in good or better condition; these measures apply statewide and are not specific to the Spokane region.

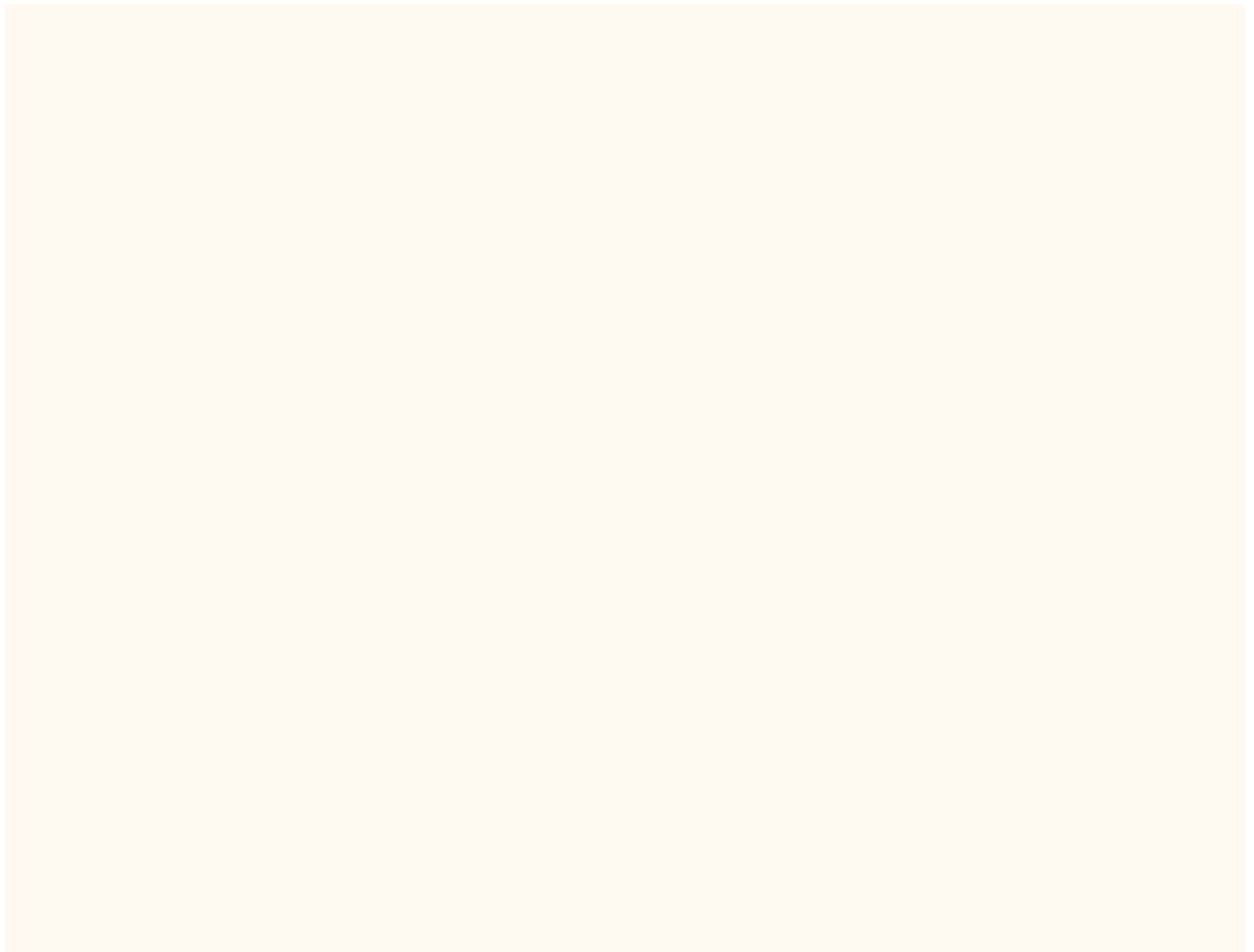
Roadways in Spokane County that are part of the NHS are shown in this figure D.3 and consist of 866.4 lane miles. Of the total, 45 percent are part of the state-owned system (which includes 144.5 lane miles of Interstate) and 55 percent are locally owned which is approximately 476.6 lane miles. The source of this information is the WSDOT, Highway Performance Monitoring System (HPMS) 2017.

WSDOT's Pavement Office conducts pavement ratings for all NHS routes. WSDOT is required to develop both two- and four-year targets; however, only the four-year targets (2022) are included in this report because the two-year target cannot be related to current conditions. WSDOT has selected four-year targets they feel are achievable based on current conditions and current funding levels. Pavement condition in Spokane County is provided for informational purposes only.

RCW 47.05 and the WSDOT's Highway System Plan set the direction for management of infrastructure condition for Washington State highways, which is to preserve pavements at lowest life cycle cost. The lowest life cycle strategy for any pavement is the strategy that maintains acceptable condition at the lowest annualized cost over the life of the asset. As required under 23 CFR 515, the specific strategies for WSDOT pavement and bridge preservation are documented in WSDOT's Transportation Asset Management Plan, certified by FHWA in May 2018.

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**Figure D.3: Map of 2020 NHS Pavement Condition in the Spokane Region (pending from WSDOT)**



WSDOT is the lead agency tracking progress toward meeting pavement performance targets. WSDOT allocates funding for pavement preservation on the NHS and distributes funding through the National Highway Performance Program (NHPP funding) grant program. Priorities for SRTC’s federal funding opportunities include prioritization questions regarding pavement condition and roadway type among other factors. SRTC also has a TIP policy to conduct a bi-annual pavement preservation call for projects. Local agencies also fund pavement preservation through other statewide grants, transportation benefit districts (TBD), or other local funds.

Statewide and SRTC MPO metropolitan area system conditions for each performance measure are included in figure D.4. System conditions reflect baseline performance (2018). The latest conditions will be updated on a biannual basis and reflected within each subsequent System Performance Report, to track performance over time in relation to baseline conditions and established targets.

SRTC supports the statewide pavement targets developed by WSDOT. These targets were adopted by the MPO board on November 8th, 2018.

**Figure D.4: Pavement Measures and Targets**

#	Measure	Statewide		Spokane County	
		2018 Performance	2022 Target	2018 Performance	2022 Target
6	Percent interstate pavements on the NHS in good condition	32.5%	30% or more	53.3%	TBD
7	Percent of interstate pavements on the NHS in poor condition	3.6%	4.0% or less	0%	TBD
8	Percent of non- interstate pavements on the NHS in good condition	18%	18% or more	5.5%	TBD
9	Percent of non-interstate pavements on the NHS in poor condition	5.0%	5.0% or less	19.5%	TBD

## BRIDGE PERFORMANCE (STATEWIDE)

Bridge performance targets are related to bridge condition for bridges on the NHS; these measures apply statewide. There are 311 bridges in Spokane County on the NHS system. Bridge condition in Spokane County is provided for informational purposes only.

RCW 47.05 and WSDOT’s Highway System Plan set the direction for management of infrastructure condition for Washington state highways, which is to preserve bridges at lowest life cycle cost. The lowest life cycle strategy for any bridge is the strategy that maintains acceptable condition at the lowest annualized cost over the life of the asset. As required under 23 CFR 515, the specific strategies for WSDOT pavement and bridge preservation are documented in WSDOT’s Transportation Asset Management Plan, certified by FHWA in May 2018.

WSDOT is the lead agency tracking progress towards meeting bridge performance targets. WSDOT allocates funding for bridge preservation and distributes it through grant programs specifically for bridge projects. Most funding for major bridge repairs and replacements come through competitive grant processes.

SRTC supports the statewide bridge targets developed by WSDOT. These targets were adopted by the MPO board on November 8th, 2018.

**Figure D.5: Bridge Measures and Targets**

#	Measure	Statewide		Spokane County	
		2018 Performance	2022 Target	2018 Performance	2022 Target
10	Percent of NHS in good condition weighted by deck area	32.8%	30% or more	47.36%	TBD
11	Percent of NHS bridges in poor condition weighted by deck area	7.8%	10.0% or less	7.96%	TBD

# HIGHWAY SYSTEM & FREIGHT PERFORMANCE (STATEWIDE)

The highway system performance measures describe how reliable the travel time is through a particular corridor; these measures apply statewide and are not specific to the Spokane region. Corridor segments are ranked as either reliable or not reliable for travel time using person-miles. Person miles is an estimate of the total distance traveled by all persons on a given trip. To be reliable this is calculated by dividing 80th percentile average annual daily travel time over 50th percentile average annual daily travel time. If the ratio is more than 1.5 then roadway travel time is unreliable.

For truck travel time reliability (TTTR) is calculated by dividing 95th percentile average annual daily travel time by the 50th percentile average annual daily travel time. If the ratio is more than 1.5 then the roadway travel time is not reliable. Spokane County numbers are provided for information purposes only.

Figures D.7 through D12 show travel time reliability for the NHS network within Spokane County.

WSDOT is the lead agency tracking progress toward meeting highway system performance targets. WSDOT and its partners are assessing performance and target achievement through the Regional Integrated Transportation Information System (RITIS) data tool. The state’s financial participation makes this tool available for WSDOT and MPOs to use the system in evaluating regional targets and to assist in other decision-making processes.

In Washington state, many of the projects selected to address mobility are prioritized through the legislative process. For this reason, SRTC and its members are developing legislative transportation priorities. Additionally, WSDOT and its partner MPOs and RTPOs are working to make unified project and program recommendations to the legislature by focusing on their shared priorities for enhancing the performance of the transportation system. A major focus of this effort is to increase the consistency between regional plans and WSDOT’s statewide plans, which includes sharing and collaboratively perfecting the data and information necessary to identify a comprehensive list of financial forecasts, maintenance needs, and project priorities related to the state system within MPOs and RTPOs.

To guide freight investments and improve freight system performance in Washington, WSDOT developed the 2017 Washington State Freight Investment Plan by engaging various freight partners and stakeholders, including MPOs and RTPOs. The Freight Investment Plan identified freight priority projects and described how those priorities would be invested and funded through FFY 2016–2020 National Highway Freight Program (NHFP) funds. Many of those project investments are currently in progress.

SRTC supports the statewide targets developed by WSDOT. These Targets were adopted by the MPO board on November 8th, 2018.

**Figure D.6: Highway System and Freight Measure and Targets**

#	Measure	Statewide		Spokane County	
		2018 Performance	2022 Target	2018 Performance	2022 Target
12	Percent of person-miles traveled on the Interstate System that are reliable	73%	68% or more	92.6%	TBD
13	Percent of person-miles traveled on the Non-Interstate System National Highway System that are reliable	77%	61%	85.7%	TBD
14	Truck travel time reliability index	1.63	1.75	1.42	TBD



Figure D.7: 2019 Percent of person-miles traveled on the Non-Interstate NHS System that are reliable-Spokane Region, 88.4%

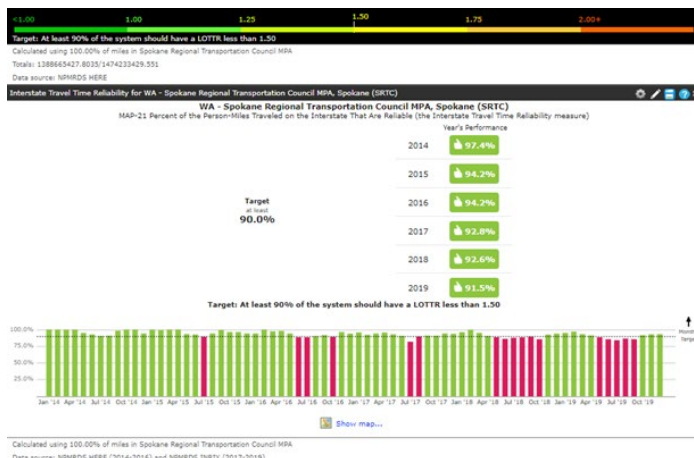


Figure D.9: 2019 Percent of person-miles traveled on the Non-Interstate NHS System that are reliable-Spokane Region, 88.4%

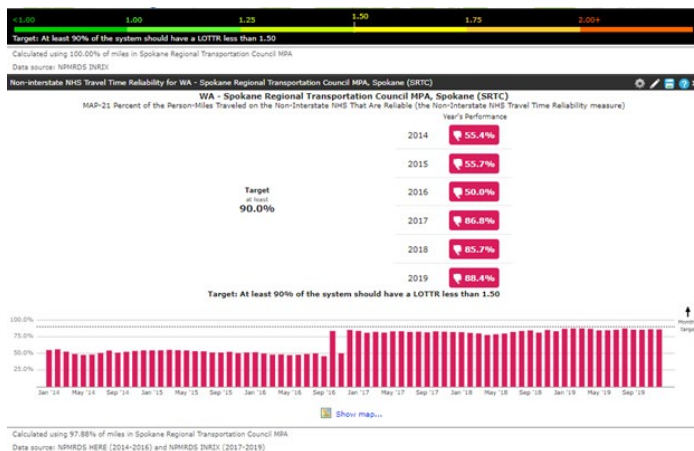


Figure D.11: 2019 Truck Travel Time Reliable index-Spokane Region, 1.42

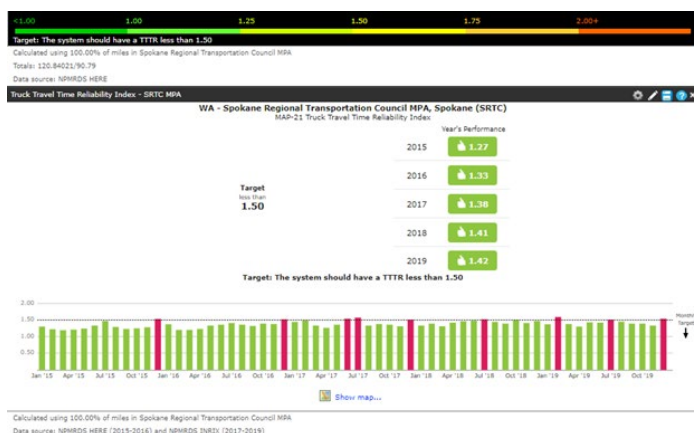


Figure D.8: 2019 Percent of person-miles traveled on the Interstate System that are reliable-Spokane Region 91.5%

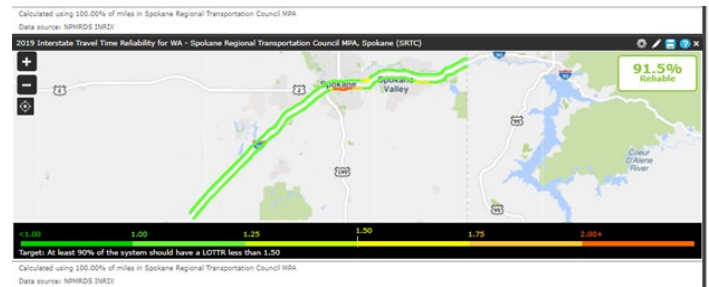


Figure D.10: 2019 Percent of person-miles traveled on the Non-Interstate NHS System that are reliable-Spokane Region, 88.4%

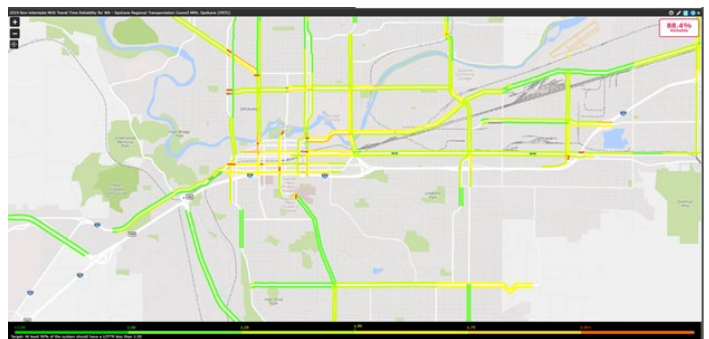


Figure D.12: 2019 Truck Travel Time Reliable index-Spokane Region, 1.42



# CONGESTION MITIGATION AIR QUALITY PERFORMANCE (STATEWIDE)

SRTC is an air quality attainment area working under a maintenance plan for past violations to the national ambient air quality standards for particulate matter ten microns or smaller (PM 10) and for Carbon Monoxide (CO). By August of 2024, the region should no longer be a maintenance plan area.

SRTC reports the air quality improvement that come from projects funded by the SRTC Congestion Mitigation Air Quality (CMAQ) funding awards. These emission improvements are rolled up into a statewide baseline and future target. SRTC supports the statewide targets developed by WSDOT. These Targets were adopted by the MPO board on November 8th, 2018.

**Figure D.13: Congestion Mitigation Air Quality Measures and Targets**

#	Measure	Statewide		Spokane County	
		2018 Performance	2022 Target	2018 Performance	2022 Target
15	Carbon Monoxide (kg/day)	313.16	309.06	347.942	306.856
16	Particulate Matter less than 10 microns (PM 10) (kg/day)	435.69	224	0.029	0.029

# TRANSIT ASSET MANAGEMENT PERFORMANCE (REGIONAL)

MPOs are required to adopt transit asset management targets based on targets set by public transit agencies within their boundaries. Spokane Transit Authority (STA) is the only public transportation provider required to report these targets to SRTC at this time. SRTC and STA are required to coordinate on these targets and the target-setting process. In accordance with 49 CFR Part 625 and 630, STA reported State of Good Repair Asset Management Targets to SRTC. SRTC agreed to support public transit asset management (TAM) developed by Spokane Transit Authority through a Board motion on June 14, 2018.

The TAM rule is the first performance rule from the Federal Transit Administration and became effective on October 1, 2016. This rule applies to all agencies receiving Chapter 53 federal funds to develop a TAM Plan to guide investments for their public transportation assets, including revenue vehicles, facilities, equipment, and infrastructure. The TAM Plan includes four required elements:

1. An inventory of capital assets
2. A condition assessment of inventoried assets
3. A description of an analytical process that assists in investment prioritization to estimate capital needs over time
4. A prioritized list of projects to manage the condition of capital assets

The TAM Plan also presents performance targets for revenue vehicles, non-revenue vehicles, and facilities, which must be reported to the National Transit Database (NTD) on an annual basis. The performance targets are related to asset Useful Life Benchmark (ULB) and asset condition.

Per federal requirements, anytime a public transit provider adopts new TAM targets, SRTC has 180 days to review and adopt TAM performance targets and bring them into the regional performance management efforts. Staff from both agencies have agreed to keep in regular contact regarding these performance targets so that consistency can be maintained between the two organizations.

**Figure D.14: TAM Measures and Targets**

#	Measure	Current/Baseline Performance	STA/Regional Target
17	Percentage of revenue service vehicles (by type) that meets or exceeds the Useful Life Benchmark (ULB): Buses	98%	>= 90% of vehicles meet STA's state of good repair standards
	Percentage of revenue service vehicles (by type) that meets or exceeds the Useful Life Benchmark (ULB): Paratransit Vans	99%	
	Percentage of revenue service vehicles (by type) that meets or exceeds the Useful Life Benchmark (ULB): Rideshare Vans	99%	
	Percentage of revenue service vehicles (by type) that meets or exceeds the Useful Life Benchmark (ULB): Special Use Vans	100%	
18	Percentage of non-revenue service vehicles (by type) that meets or exceeds the ULB	94%	>= 90% of vehicles meet STA's state of good repair standards
19	Percentage of facilities (by group) that are rated 3.0 (adequate) or better on the Transit Economic Requirement Model (TERM) Scale	100%	>= 90% of facilities have TERM condition rating of 3 or better

# PUBLIC TRANSIT SAFETY PERFORMANCE (REGIONAL)

MPO's are required to adopt public transit safety targets found in the Public Transportation Agency Safety Plan (PTASP) of the public transit agencies within their boundaries, as required by 49 CFR 473. Spokane Transit Authority (STA) is the only public transportation provider required to report these targets to SRTC at this time. SRTC and STA are required to coordinate on these targets and the target-setting process. Per federal requirements, anytime a public transit provider adopts new targets, SRTC has 180 days to review and adopt performance targets and bring them into the regional performance management efforts. SRTC agreed to support safety targets developed by Spokane Transit Authority through a Board motion on March 11th, 2021 the SRTC Board adopted STA PTSP as part of the SRTC TIP amendment.

## SAFETY GOALS, OBJECTIVES & PERFORMANCE TARGETS

Spokane Transit's first step in Safety Assurance is establishing Safety Objectives and Performance Targets to meet the Agency's safety goals and are sufficient to control the risks. Key Performance Indicators (KPIs) are established that indicate whether the Agency is achieving its safety objectives and performance targets.

### 20. SAFETY GOAL 1—SAFETY MANAGEMENT SYSTEMS TO REDUCE CASUALTIES & OCCURRENCES

Using a safety management systems framework to identify safety hazards, mitigate risk and reduce casualties and occurrences resulting from transit operations to meet or exceed the acceptable level of safety performance.

Figure D.15: Safety Goal 1 Measure and Targets

	Objective	Metrics	Baseline	Target
Fixed Route Preventable Vehicle Accident Frequency Rate	Reduce the frequency of preventable vehicle collisions	Number of preventable events per 10,000 miles	0.6	0.08 or less
Paratransit Preventable Vehicle Accident Frequency Rate	Reduce the frequency of preventable vehicle collisions	Number of preventable events per 10,000 miles	0.13	0.1 or less
Fixed Route Preventable Passenger Injury Accidents	Reduce the frequency of preventable passenger injuries	Number of preventable passenger injuries per year	4	0
Paratransit Preventable Passenger Injury Accidents	Reduce the frequency of preventable passenger injuries	Number of preventable passenger injuries per year	4	0
Fixed Route Safety Events	Reduce the number of events per year	Total number of events per year	316	310
Paratransit Safety Events	Reduce the number of safety events per year	Number of safety events per year	54	50
Employee Injury Accidents	Reduce the frequency of employee injuries	Number of employee injuries per 1,000 hours	0.05	0.07
Employee Injury Severity	Reduce employee time loss due to injury or illness	Number of days lost per 1,000 hours	0.03	0.04
Facility Safety Inspections	Increase the assessment of facilities, equipment, and procedures to identify and mitigate any potential safety risks	Number of facility safety audits and inspections completed quarterly per year	1 per quarter	Meet the baseline

## 21. SAFETY GOAL 2—SAFETY MANAGEMENT SYSTEMS TO FOSTER A ROBUST SAFETY CULTURE

Foster agency-wide support for transit safety by establishing a culture where managers are held accountable for safety and everyone in the organization takes an active role in securing transit safety, cultivate a safety culture in which employees are comfortable and encouraged to bring safety concerns to the attention of agency leadership.

Figure D.16: Safety Goal 2 Measure and Targets

	Objective	Metrics	Baseline	Target
Safety Training	Increase attendance at monthly safety meetings	Percent of employees who participate in the monthly safety meetings	Establishing in 2020	Safety Committee Meeting Target = 100%
	Annual Advanced Training completed by all Fixed Route, Paratransit, and Maintenance	Percentage of employees who complete Advanced training	100%	100%

## 22. GOAL 3—SAFETY MANAGEMENT SYSTEMS TO ENSURE SAFE & EFFICIENT SYSTEMS/EQUIPMENT

STA will provide safe and efficient transit operations by ensuring all vehicles, equipment and facilities are regularly inspected, maintained and services as required.

Figure D.16: Safety Goal 2 Measure and Targets

	Objective	Metrics	Baseline	Target
Fixed Route Road Calls	Reduce the number of Fixed Route Road Calls	Number of miles between road calls	6,722 miles	7,500 miles
Paratransit Road Calls	Reduce the number of Paratransit Road Calls	Number of miles between road calls	67,537 miles	75,000 miles
Facilities Preventative (Safety) Inspections & Repairs	Prioritize preventative safety-related maintenance or inspections	Safety-related PMs completed on schedule	90% of all PM services completed on time	80% of all PM services completed on time