BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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TECHNICAL MEMORANDUM

DATE: **April 8, 2021**
TO: **Boston Region Metropolitan Planning Organization**
FROM: **Michelle Scott, MPO Staff**
RE: **Transit Safety Performance Requirements and Targets**

While public transportation is among the safest surface transportation modes in the United States, recent federal transportation legislation includes specific mandates to strengthen the safety of transit systems.[1] Under the Federal Transit Administration's (FTA) Public Transportation Agency Safety Plan (PTASP) Rule, applicable transit agencies are required to develop safety plans that define how these agencies will implement Safety Management Systems (SMS).[2] These transit plans are required to include targets for performance measures defined in the National Public Transportation Safety Plan, which relate to fatalities, injuries, safety events, and system reliability.[3] Metropolitan planning organizations (MPOs) are federally required to set performance targets for these transit safety performance measures for their regions, in coordination with transit and state agencies. These requirements acknowledge the collaborative relationships needed to manage safety risks on transit systems.

This memorandum summarizes federal transit safety performance requirements and related planning activities conducted by applicable transit agencies in the Boston region. It also describes federally defined transit safety performance measures and the most recent set of transit safety targets set by the Massachusetts Bay Transportation Authority (MBTA), the Cape Ann Transportation Authority (CATA), and the MetroWest Regional Transit Authority (MWRTA). Boston Region MPO staff proposes that the MPO board adopt these targets as presented to serve as targets for the Boston region, and staff requests that the board do so at its April 8, 2021, meeting. Finally, the memorandum discusses next steps for the MPO to incorporate these targets into its performance-based planning and programming process. These transit safety

[1] See Bureau of Transportation Statistics, *Transportation Statistics Annual Report 2020,* 2020. Accessed March 27, 2021 at https://rosap.ntl.bts.gov/view/dot/53936, pg. 6-1 to 6-10.
[2] Title 49, Part 673, of the Code of Federal Regulations.
[3] Federal Transit Administration. *National Public Transportation Safety Plan.* January 2017. Accessed March 26, 2021 at https://www.transit.dot.gov/regulations-and-guidance/safety/national-public-transportation-safety-plan.

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performance activities support the MPO's goal to make the region's transportation system safe and addresses related objectives:

- Reduce the number and severity of crashes and safety incidents for all modes
- Reduce serious injuries and fatalities from transportation
- Make investments and support initiatives that help protect transportation customers, employees, and the public from safety and security threats

1 TRANSIT SAFETY PERFORMANCE OVERVIEW

The Moving Ahead for Progress in the 21st Century Act, which was passed by Congress in 2012, created a new Public Transportation Agency Safety Program.[4] This new program resulted in several new FTA rulemakings:

- Transit Asset Management (TAM) (Title 49, Part 625, Code of Federal Regulations [CFR])
- Public Transportation Safety Program (49 CFR Part 670)
- Public Transportation Safety Certification Training Program (49 CFR Part 672)
- Public Transportation Agency Safety Plan (49 CFR Part 673)
- State Safety Oversight (49 CFR Part 674)

The work of the Boston Region MPO relates most directly to the Transit Asset Management and PTASP rules, as well as the Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning rule, which defines MPOs and states' planning and performance management responsibilities.[5] The TAM rule requires public transit providers, MPOs, and states to develop targets for federally established transit asset performance measures in coordination with one another, and the Boston Region MPO has adopted and updated targets for these measures since 2018.[6] The PTASP rule similarly requires transit providers, MPOs, and states to develop targets for established transit safety measures.

1.1 Transit Safety Management Systems and Plans

The PTASP rule, which was finalized in 2018, requires certain public transit operators that receive federal funds from FTA's Urbanized Area Formula Grants (Title 49, Section 5307, of the US Code) or that operate rail systems subject to FTA's State Safety Oversight Program to develop agency safety plans (ASPs)

[4] MBTA. *MBTA Transit Safety Plan*. June 15, 2020, pg. 21.

[5] The Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning rule is codified in 23 CFR Part 450, 23 CFR Part 771, and 49 CFR Part 613.

[6] Information about the MPO's current and past TAM targets is available at bostonmpo.org/performance.

that will support implementation of Safety Management Systems (SMS).[7] A safety management system is a "formal, top-down, organization-wide data-driven approach to managing safety risks and assuring the effectiveness of safety risk mitigations" that "includes systematic procedures, practices, and policies for managing risks and hazards.[8] Examples of these components include protocols for reporting incidents and specific methods for identifying, categorizing, and responding to safety risks. Overall, these systems are designed to help transit agency leaders and employees "control risk better, detect and correct safety problems earlier, analyze safety data more effectively, and measure safety performance more precisely."[9]

Under the PTASP rule, transit providers are required to create ASPs that describe the processes and procedures they will use to implement their SMS.[10] Large bus and rail transit systems develop their own ASPs, while smaller transit providers can work with their state department of transportation to create their ASPs or choose to do it on their own. The content of these plans is shaped by the National Public Transportation Safety Plan, which guides the national effort to improve safety on public transportation systems. In general ASPs define roles and responsibilities, and they discuss how transit agencies will comply with federal, state, and local regulations and incorporate safety best practices. They address the four main components of SMS, which include safety management policies, safety risk management strategies, safety assurance methods (which includes performance monitoring), and safety promotion (including training and communication practices). These plans also describe performance targets for federally required measures, which will be discussed in the next section, and they may also discuss other measures the transit agency may use to monitor its safety performance. Transit agencies must update and certify these plans on an annual basis.

1.2 Safety Performance Measures and Targets

Measures Overview

The National Public Transportation Safety Plan identifies safety performance measurement as a key component of safety management processes. It defines measures in four areas—fatalities, serious injuries, safety events, and system

[7] The FTA is deferring applicability of PTASP requirements for operators that only receive funds through FTA's Enhanced Mobility of Seniors and Individuals with Disabilities Formula Program (Section 5310) and/or Rural Area Formula Program (Section 5311). For more information, visit transit.dot.gov/PTASP.

[8] *MBTA Transit Safety Plan,* pg. 14.

[9] FTA. "PTASP Frequently Asked Questions." December 14, 2020. Accessed March 26, 2021 at transit.dot.gov/PTASP-FAQs.

[10] MBTA, CATA, and MWRTA ASPs are available on the April 8, 2021, page of the MPO meeting calendar. See bostonmpo.org/calendar/day/2021-04-08.

reliability—that transit providers can use to understand their performance and that the FTA and other federal agencies can use to understand safety trends nationwide. Transit providers track performance in these areas by transit modes, such as fixed-route bus service, light and heavy rail for rapid transit systems, and demand response service. The ASPs and performance measures do not apply to modes that fall under the jurisdiction of the Federal Railroad Administration, such as commuter rail, or the US Coast Guard, which covers ferries.[11] These modes are subject to other federal safety requirements and management processes.

Table 1 describes the measures discussed in transit agency ASPs. For all measures except for the system reliability measure, the goal is to minimize the value.

Table 1
Federally Required Transit Safety Performance Measures

Measure Category	Measure	Desired Direction
Fatalities	Total number of reportable fatalities by mode	Decrease
Fatalities	Fatality rate per total VRM by mode	Decrease
Injuries	Total number of reportable injuries by mode	Decrease
Injuries	Injury rate per total VRM by mode	Decrease
Safety Events	Total number of reportable safety events by mode	Decrease
Safety Events	Rate of safety events per total VRM by mode	Decrease
System Reliability	Mean distance between major mechanical failures by mode	Increase

VRM = vehicle-revenue-miles.
Sources: Federal Transit Administration and Boston Region Metropolitan Planning Organization.

Several definitions, which relate to information that transit agencies need to report to the National Transit Database (NTD), apply to these performance measures[12]:

- **Reportable fatalities:** These include deaths (confirmed within 30 days) due to collision, derailment, fire, hazardous material spill, acts of God, system or personal security event, or other safety event. Fatalities

[11] FTA. "PTASP Frequently Asked Questions."

[12] See the NTD *Safety and Security Policy Manual*, January 2020, available at https://www.transit.dot.gov/ntd/2020-safety-and-security-policy-manual. See also FTA, "Safety Performance Target Fact Sheet," August 24, 2020, available at https://www.transit.dot.gov/safety/public-transportation-agency-safety-program/safety-performance-targets-fact-sheet.

resulting from illness or other natural causes (including those who have been found deceased) are excluded. The PTASP fatality measures also exclude deaths from trespassing or suicide.

- **Reportable injuries:** These include instances of damage or harm to persons that require immediate medical attention away from the scene because of a reportable transit safety event. Serious injuries, which are defined based on severity, are always reportable, even if a person was not immediately transported from the scene for medical attention. The PTASP injury measures exclude injuries resulting from assaults or other crimes.
- **Reportable safety events:** These include incidents (including accidents and derailments) meeting NTD major reporting thresholds for transit rail, bus, and paratransit. These events may occur on transit right-of-way or infrastructure, or at a transit revenue facility, maintenance facility, or rail yard. They may take place during a transit-related maintenance activity or otherwise involve a transit revenue vehicle. Examples of these events include
    - collisions;
    - fires;
    - derailments (mainline and yard), including non-revenue vehicles;
    - hazardous materials spills; and
    - acts of God.[13]

  NTD reporting thresholds for safety events are based on factors such as fatalities, injuries requiring immediate medical attention away from the scene, substantial damage, and evacuation for protection of life and safety reasons. Major security events, such as arson or hijacking, are not included in this measure.
- **Major mechanical failures:** The NTD defines major mechanical failures as "a failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip because actual movement is limited or because of safety concerns."[14] For example, major mechanical failures on the bus network include breakdowns of brakes, doors, engine cooling systems, steering, axles, and suspension.[15]

[13] FTA. *National Transit Database Safety and Security Policy Manual*. January 2020. Accessed March 29, 2021 at https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/ntd/146986/2020-ntd-safety-and-security-policy-manual.pdf, pg. 18.
[14] FTA, "Safety Performance Target Fact Sheet," pg. 2.
[15] *MBTA Transit Safety Plan,* pg. 36.

Targets Overview

Generally, transit agencies set safety performance targets for each applicable transit mode for the upcoming year. The FTA provides transit agencies with flexibility to set their targets to meet the specific context of their transit service. These agencies can choose (1) the reporting timeframe they use (calendar, fiscal, or NTD reporting year), (2) the vehicle-revenue-miles (VRM) denominator values that transit agencies use for the rate measures, and (3) the methodologies for picking a target value.[16] The FTA encourages transit providers to set realistic safety targets that consider relevant safety goals and objectives, but these providers have the latitude to set aspirational targets, targets that represent improvement over current safety performance levels, or targets that maintain current performance levels. The FTA has not established, and will not impose, penalties for transit agencies that do not meet their targets, which FTA reviews during a transit agency's Triennial Review.

1.3 MPO Responsibilities

Like the TAM rule, the PTASP rule requires transit providers to make their safety performance targets available to states and MPOs. These providers must also coordinate with states and MPOs as these entities set their transit safety performance targets, to the maximum extent practicable. As part of this coordination, transit agencies may choose to use a particular year (calendar, fiscal, or NTD reporting year) or VRM denominator value (for reporting rate targets) at the request of states or MPOs.

MPOs must also incorporate these targets into their planning processes and documents, as is required for targets for all federal performance areas. In general, an MPO can consider how the projects and programs it selects to receive federal funding may improve transit safety outcomes. In the Boston Region MPO's case, MPO board members can review projects and programs that the MBTA, CATA, and MWRTA submit for inclusion in the TIP in this context, and they can also consider how the MPO's discretionary dollars can be used to reduce fatalities, injuries, safety events, and mechanical failures that may occur on the region's transit systems.

In addition to integrating safety performance measures and targets into their planning processes, MPOs must also reflect them in their planning documents:

- MPOs must incorporate transit safety performance measures, baseline values, and targets in the system performance report included in their next Long-Range Transportation Plan (LRTP). Subsequent LRTPs must

[16] FTA, "Safety Performance Target Fact Sheet," pg. 1.

describe progress that has been made compared to the baseline values and targets recorded in prior system performance reports.

- When developing Transportation Improvement Program (TIP) documents, MPOs must describe transit safety measures and targets and, "to the maximum extent practicable, provide a description of the anticipated effect of the TIP toward achieving the performance targets identified in the metropolitan transportation plan," the goal of which is to link investment priorities to those performance targets.[17]

MPOs must revisit their transit safety targets whenever the TIP or LRTP is updated, at which point the MPOs can decide to maintain or update the targets. MPOs will neither be penalized for not achieving regional transit safety performance targets nor rewarded for attaining them. The FTA will review MPO performance-based planning and programming activities, including those related to transit safety performance, as part of MPO certification reviews.

2 BOSTON REGION TRANSIT AGENCIES' SAFETY TARGETS

2.1 Overview

To meet federal transit safety requirements, the Boston Region MPO coordinates with the MBTA, CATA and MWRTA, which all receive FTA Urbanized Area Formula Grant funding and submit projects and programs to the MPO's TIP. As previously mentioned, the FTA gives transit agencies flexibility when developing targets for their specific service areas. The MBTA, CATA, and MWRTA systems have distinct operating contexts that may shape their decisions when setting safety targets. In this case, each agency has taken a somewhat different approach to setting targets, so their targets are presented separately. MPO staff recommends adopting these transit agencies' safety targets as presented, as they reflect each agency's understanding of the factors that will affect safety outcomes in their service areas, including the characteristics of their local operating environments and contexts and planned investment, policies, and safety-management activities. This first set of targets will provide a baseline for future coordination on improving transit safety outcomes in the region.

2.2 MBTA Safety Targets

The MBTA monitors performance and sets federally required targets for four modes: heavy rail (Red, Orange, and Blue Lines), light rail (Green Line and the Mattapan High Speed Line), bus, and The RIDE paratransit system. Based on calendar year (CY) 2017–19 averages, the MBTA runs approximately 23,391,000 VRM of service on its heavy rail system; 5,817,000 VRM on its light rail system;

[17] 23 CFR Part 450.326.

23,692,000 VRM on its bus network; and 16,379,000 VRM for The RIDE. Its commuter rail network and ferry service are not subject to these FTA requirements and are addressed outside of the PTASP process.

Table 2 shows past averages for the federally required transit safety measures for MBTA heavy rail, light rail, bus, and The RIDE, based on data provided by the MBTA. These averages reflect safety data from CYs 2017 to 2019.

Table 2
Past Safety Performance Data for
MBTA Transit Services (CYs 2017–19 Averages)

MBTA Mode	Average Fatalities	Average Fatality Rate	Average Injuries	Average Injury Rate	Average Safety Events	Average Safety Event Rate	Average System Reliabilty Value
Heavy Rail	0.33	0.01	232.67	9.95	24.67	1.06	49,732.00
Light Rail	0.33	0.06	105.67	18.16	35.67	6.13	7,660.00
Bus	1.00	0.04	386.33	16.31	149.33	6.32	19,451.00
The RIDE	0.33	0.02	40.00	2.43	38.67	2.34	66,134.00

Notes: Fatality, injury, and safety event rates are expressed per one million VRM. Values have been rounded to the nearest hundredth. The system reliability measure is expressed as mean VRM traveled per major mechanical failure. This table reflects data available at the time the MBTA developed its targets.
CY = calendar year. MBTA = Massachusetts Bay Transportation Authority. VRM = vehicle-revenue miles.
Source: MBTA and the Boston Region Metropolitan Planning Organization staff.

The MBTA established its initial set of performance targets for CY 2020 and chose to maintain these targets for CY 2021. These targets are shown in Table 3. When setting targets, the MBTA varied its approach by measure:

- **Fatalities and Fatality Rates:** The MBTA notes that fatality rates vary across modes due to the distinct operating environments and the inherent safety risk exposure associated with each mode.[18] The MBTA is committed to reducing the number of fatalities across its system to zero and continues to invest in proactive solutions to achieve this goal.[19]
- **Injuries and Injury Rates:** The MBTA developed its targets for these two injury measures by assuming a five percent decrease in the injury rate from the CYs 2017–19 average for each mode.

[18] *MBTA Transit Safety Plan,* pg. 34.
[19] *MBTA Transit Safety Plan,* pg. 34.

- **Safety Events and Safety Event Rates:** The MBTA established targets for these two measures by assuming a five percent decrease in the safety event rate from the CYs 2017–19 average. The MBTA uses both proactive and reactive safety risk management strategies to reduce the rate of safety events on its system.[20]
- **System Reliability:** As previously mentioned, transit system reliability is measured by the mean number of VRM traveled between major mechanical failures. For system reliability for heavy rail, light rail, and The RIDE, the MBTA aimed to improve upon 2019 performance for each mode and reach values closer to the CYs 2017–19 averages. For system reliability for the bus mode, the MBTA set a target value that the agency felt would be attainable based on expected changes to the fleet and resulting changes to established maintenance practices. Overall, the MBTA plans to introduce new vehicles into its fleets on multiple modes over the next few years. As these new vehicles are brought into revenue service (once initial safety conditions are met), the MBTA will continue to monitor them. During this additional "burn-in" period, there may be a decrease in reliability. With this possibility in mind, the MBTA will strive to maintain the highest level of system reliability in CY 2021.[21]

Table 3
MBTA CY 2021 Safety Performance Targets Summary

MBTA Mode	Fatalities Target	Fatality Rate Target	Injuries Target	Injury Rate Target	Safety Events Target	Safety Event Rate Target	System Reliability Target
Heavy Rail	0.00	0.00	221.00	9.45	24.00	1.00	47,000.00
Light Rail	0.00	0.00	100.00	17.25	34.00	5.83	7,000.00
Bus	0.00	0.00	367.00	15.50	142.00	6.00	18,000.00
The RIDE	0.00	0.00	36.00	2.30	37.00	2.22	66,000.00

Note: Fatality, injury, and safety event rates are expressed per one million VRM. Values have been rounded to the nearest hundredth. The system reliability measure is expressed as mean VRM traveled per major mechanical failure.

CY = calendar year. MBTA = Massachusetts Bay Transportation Authority. VRM = vehicle-revenue miles.

Source: MBTA and the Boston Region Metropolitan Planning Organization staff.

[20] *MBTA Transit Safety Plan,* pg. 36.
[21] *MBTA Transit Safety Plan,* pg. 36.

2.3 CATA Safety Targets

CATA monitors performance and sets federally required targets for its fixed-route bus service and its demand response service. According to averages calculated using CYs 2016-19 data, CATA's demand response system runs about 127,000 VRM annually, and its fixed route bus system runs about 212,000 VRM annually. CATA has established targets for state fiscal year (SFY) 2021 (July 2020 to June 2021), and it expresses its rate targets per one million vehicle miles traveled.

Table 4 shows past averages for the federally required transit safety measures for CATA's fixed-route and demand response services. While this historic data is shown in calendar years, as opposed to state fiscal years, this table does provide details about expected fatalities, injuries, safety events and expected system reliability within a 12-month period. The table provides CYs 2016–19 averages for the fatality, injury and safety event measures, and CYs 2016–18 averages for the system reliability measure.[22]

Table 4
Past Safety Performance Data for CATA Transit Services (in CY Averages)

CATA Mode	2016–19 Average Fatalities	2016–19 Average Fatality Rate	2016–19 Average Injuries	2016–19 Average Injury Rate	2016–19 Average Safety Events	2016–19 Average Safety Event Rate	2016–19 Average System Reliabilty Value*
Fixed-Route Bus	0.00	0.0	1.00	4.72	0.75	3.54	57,865.39
Demand Response	0.00	0.0	0.25	1.98	0.25	1.98	126,913.25

Notes: Fatality, injury, and safety event rates are expressed per one million VRM. Values have been rounded to the nearest hundredth. The system reliability measure is expressed as mean VRM traveled per major mechanical failure. These values reflect data that have been updated since the development of CATA's ASP and targets. For previous values, see CATA's ASP.

* CATA used 2016–18 averages a basis for its system reliability targets, as 2019 data on major mechanical failures was not available at the time the draft ASP and targets were developed. The 2016–18 average is 68,068.00 for fixed-route bus and 125,340.00 for demand response service.

ASP = agency safety plan. CATA = Cape Ann Transportation Authority. CY = calendar year VRM = vehicle-revenue miles.

Sources: CATA, Cambridge Systematics, and the Boston Region Metropolitan Planning Organization staff.

In general, CATA used past data and averages as the basis for determining its transit safety performance targets. When CATA set targets, it reviewed data for years when injuries or safety events did take place and reflected those values

[22] CATA's rate measures are expressed per one million VRM. CATA runs fewer than one million VRM on each of its services, which can result in the target year fatality rate appearing larger than the number of injuries expected to happen in that year.

when setting injury and safety event rate targets for SFY 2021. Table 5 provides a summary of CATA's SFY 2021 performance targets.

Table 5
CATA SFY 2021 Safety Performance Targets Summary

CATA Mode	Fatalities Target	Fatality Rate Target	Injuries Target	Injury Rate Target	Safety Events Target	Safety Event Rate Target	System Reliabilty Target
Fixed-Route Bus	0.0	0.0	1.0	4.8	1.0	4.8	70,000.0
Demand Response	0.0	0.0	1.0	8.2	1.0	8.2	125,000.0

Note: Fatality, injury, and safety event rates are expressed per one million VRM. Values have been rounded to the nearest tenth. The system reliability measure is expressed as mean VRM traveled per major mechanical failure.

CATA = Cape Ann Transportation Authority. SFY = state fiscal year. VRM = vehicle-revenue miles.

Source: CATA and the Boston Region Metropolitan Planning Organization staff.

2.4 MWRTA Safety Targets

Like CATA, MWRTA monitors performance and sets federally required targets for fixed-route bus service and demand response services, and the agency has set targets for SFY 2021. However, MWRTA expresses its fatality, injury, and safety event rates per one hundred thousand vehicle revenue miles to align with data that it reports to the Massachusetts Department of Transportation (MassDOT). MWRTA runs, on average, approximately 1,201,000 VRM of fixed-route service per calendar year and approximately 1,058,000 VRM of demand response service per calendar year, based on NTD safety data for CYs 2018–19.

Table 6 shows agency data for SFYs 2019 and 2020 that MWRTA considered when developing its SFY 2021 performance targets. In addition to information about fatalities and injuries, Table 6 provides information about preventable accidents, which MWRTA and other regional transit authorities (RTAs) report annually to MassDOT. Preventable accidents are defined as "those accidents in which the transit driver is typically deemed responsible or partly responsible for the occurrence of the accident."[23]

[23] Massachusetts Department of Transportation. *Tracker 2020.* Accessed March 29, 2021 at https://www.massdottracker.com/wp/?p=4488.

Table 6
MWRTA Past Safety Performance Data (SFYs 2019–20)

MWRTA Mode	SFY 2019 Fatalities	SFY 2019 Injuries	SFY 2019 Preventable Accidents	SFY 2020 Fatalities	SFY 2020 Injuries	SFY 2020 Preventable Accidents
Fixed-Route Bus	0	2	16	0	0	10
Demand Response	0	0	18	0	0	10

.MWRTA = MetroWest Regional Transit Authority. SFY = state fiscal year.
Source: MWRTA and Boston Region Metropolitan Planning Organization staff.

Table 7 shows past averages for the federally required transit safety measures for MWRTA's fixed-route and demand response services in calendar year format, which is similar to the data presented for the MBTA and CATA. MPO staff collected this information from the NTD's Safety and Security Time Series data files and the NTD Annual Vehicle Database files for CYs 2018 and 2019, which overlap the period covered by the data in Table 6.[24] As with the data shown for CATA, this NTD data is shown in calendar years, as opposed to state fiscal years, but it does provide details about expected fatalities, injuries, safety events and expected system reliability within a 12-month period. As previously mentioned, MWRTA's rate values are expressed in 100,000 VRM.

[24] The NTD Safety and Security Time series data shown in these tables is current as of November 2020 and were published on March 4, 2021. For more information, see NTD, "Safety and Security Time Series Data" at transit.dot.gov/ntd/data-product/safety-security-time-series-data and NTD, "Safety and Security Major-Only Time Series Data" at transit.dot.gov/ntd/data-product/safety-security-major-only-time-series-data. For the 2018 and 2019 Annual Vehicle Maintenance files, see https://www.transit.dot.gov/ntd/data-product/2018-annual-database-vehicle-maintenance and product/2019-annual-database-vehicle-maintenance.

Table 7
Past Safety Performance Data for
MWRTA Transit Services (CYs 2018–19 Averages)

MWRTA Mode	Average Fatalities	Average Fatality Rate	Average Injuries	Average Injury Rate	Average Safety Events	Average Safety Event Rate	Average System Reliabilty Value*
Fixed-Route Bus	0.00	0.00	0.50	0.04	1.50	0.12	65,050.15
Demand Response	0.00	0.00	3.00	0.28	3.50	0.34	82,148.70

Notes: Fatality, injury, and safety event rates are expressed per one hundred thousand VRM. Values have been rounded to the nearest hundredth. The system reliability measure is expressed as mean VRM traveled per major mechanical failure.

CY = calendar year. MWRTA = MetroWest Regional Transit Authority. NTD = National Transit Database. VRM = vehicle-revenue miles.

Source: NTD Safety and Security Time Series Data files (as of November 2020, published March 4, 2021), NTD 2018 and 2019 Annual Vehicle Database Files, and the Boston Region Metropolitan Planning Organization staff.

Table 8 provides a summary of MWRTA's SFY 2021 performance targets. MWRTA sought to set attainable values for these federally required performance measures. These target values maintain zero fatalities on MWRTA's fixed route bus and demand response systems and are somewhat higher than recent actual values for other performance measures.

Table 8
MWRTA SFY 2021 Safety Performance Targets Summary

MWRTA Mode	Fatalities Target	Fatality Rate Target	Injuries Target	Injury Rate Target	Safety Events Target	Safety Event Rate Target	System Reliability Target
Fixed-Route Bus	0.00	0.00	12.00	1.00	24.00	2.00	75,000.00
Demand Response	0.00	0.00	8.00	1.00	16.00	2.00	75,000.00

Note: Fatality, injury, and safety event rates are expressed per one hundred thousand VRM. Values have been rounded to the nearest tenth. The system reliability measure is expressed as mean VRM traveled per major mechanical failure.

MWRTA = MetroWest Regional Transit Authority. SFY = state fiscal year. VRM = vehicle-revenue miles.

Source: MWRTA and the Boston Region Metropolitan Planning Organizaiton staff.

3 REQUESTED ACTION AND NEXT STEPS

MPO staff recommends that the Boston Region MPO vote to adopt this set of MBTA, CATA, and MWRTA performance targets for the Boston region. As previously mentioned, each agency's set of targets reflect its operating context and anticipated safety-related investments, policies, and safety management activities. Should the MPO adopt this set of transit agency targets as its regional targets, staff will present and describe these targets in the performance chapters of the FFYs 2022–26 TIP document. Going forward, the MPO will work with transit agencies and MassDOT to use transit performance measures and targets to monitor transit safety outcomes in the region, and to consider what effect the transit programs and projects proposed for the MPO's TIP will have on safety outcomes on the region's transit systems.

MS/ms

The Boston Region Metropolitan Planning Organization (MPO) operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin (including limited English proficiency), be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination under any program or activity that receives federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, Federal Transit Administration, or both, prohibit discrimination on the basis of age, sex, and disability. The Boston Region MPO considers these protected populations in its Title VI Programs, consistent with federal interpretation and administration. In addition, the Boston Region MPO provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with U.S. Department of Transportation policy and guidance on federal Executive Order 13166.

The Boston Region MPO also complies with the Massachusetts Public Accommodation Law, M.G.L. c 272 sections 92a, 98, 98a, which prohibits making any distinction, discrimination, or restriction in admission to, or treatment in a place of public accommodation based on race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry. Likewise, the Boston Region MPO complies with the Governor's Executive Order 526, section 4, which requires that all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background.

A complaint form and additional information can be obtained by contacting the MPO or at http://www.bostonmpo.org/mpo_non_discrimination. To request this information in a different language or in an accessible format, please contact

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