

**Metropolitan Transportation Commission
Planning Committee**

December 10, 2021

Agenda Item 4b

Federal Performance Target-Setting Update: 2022 Transit Safety Targets

Subject:

Update on federally required target-setting activities for transit safety performance measures, which are being set by transit operators and MTC for the first time.

Background:

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) established a Transportation Performance Management program to orient transportation investment decision-making around national transportation goals, while also moving toward a performance-based planning and programming paradigm. Through this program, State Departments of Transportation (DOTs), Metropolitan Planning Organizations (MPOs), and transit agencies are responsible for setting targets for 28 performance measures covering the following federal goal areas: Safety; Infrastructure Condition; System Reliability; Freight Movement and Economic Vitality; Congestion Reduction; and Environmental Sustainability (shown in **Attachment A**). Under MTC Resolution No. 4295 adopted in June 2017, the Planning Committee delegated authority for target-setting to staff, requiring regular consultation with stakeholders through MTC's working groups and semiannual updates to the committee.

This will be the first round of transit safety target-setting for transit operators and MTC. This memorandum summarizes MTC target-setting actions and presents the methodology used to arrive at the targets (detailed in **Attachment B** and **Attachment C**). Federal regulations specify the following seven performance targets related to the transit safety goal area:

- Total number of reportable transit fatalities
- Reportable transit fatalities per revenue vehicle miles (RVM) by mode
- Total number of reportable transit injuries
- Reportable transit injuries per RVM by mode
- Total number of reportable transit safety events
- Reportable transit safety events per RVM by mode
- Mean distance between major mechanical failures by mode

In setting these targets, MTC staff worked with the region's transit operators that are required to develop Public Transit Agency Safety Plans (PTASPs), which include agency-specific transit safety targets. Federal regulations require most transit operators to develop PTASPs and set transit safety targets, though operators that fall under the safety jurisdiction of the Federal Railroad Administration or the United States Coast Guard and operators that do not receive Urbanized Area Formula Grant Program funds under 49 U.S.C. § 5307 (Section 5307 Grant Program) are exempt. As a result, while the MTC region has several commuter rail and ferry operators, staff has not established performance targets for those modes.

Based on the transit operators' assessment of future transit safety conditions, MTC expects to see improvements in performance across all seven performance measures. In line with regional Vision Zero targets for roadway safety, transit operators set targets to eliminate all reportable fatalities on transit systems regionwide. Additionally, targets suggest that transit operators expect to see fewer injuries and safety events and greater system reliability in the near-term.

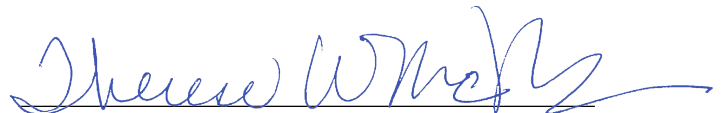
While promoting safe conditions for passengers and staff was an emphasis area for the Blue Ribbon Transit Recovery Task Force and transit operators regionwide, these targets are narrowly tailored to track fatalities, injuries, and safety events that occur during revenue service, per rulemaking completed before the onset of the COVID-19 pandemic. These targets highlight the commitment to passenger and staff safety held by MTC and Bay Area transit operators.

Issues:

None identified.

Attachments:

- Attachment A: List of Federally Required Performance Measures
- Attachment B: 2022 Target-Setting Methodology for Transit Safety
- Attachment C: 2022 Targets for Transit Safety



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Attachment A: 2022 List of Federally Required Performance Measures

FEDERAL GOALS & PROGRAMS	GENERAL MEASURES IN LAW	FINAL PERFORMANCE MEASURES	TARGET-SETTING FREQUENCY	TARGET-SETTING DUE DATES	CURRENT STATUS
Safety	Number of Fatalities on Roads	1. Total number of road fatalities	Annual	State: August 2021 MPO: February 2022	Caltrans set its 2022 targets in August 2021. MTC must set regional targets by February 2022. Four rounds of target-setting complete.
	Rate of Fatalities on Roads	2. Road fatalities per 100M VMT	Annual	State: August 2021 MPO: February 2022	
	Number of Serious Injuries on Roads	3. Total number of serious injuries on roads	Annual	State: August 2021 MPO: February 2022	
	Rate of Serious Injuries on Roads	4. Serious injuries on roads per 100M VMT	Annual	State: August 2021 MPO: February 2022	
	Non-Motorized Safety on Roads	5. Combined total number of non-motorized fatalities and serious injuries	Annual	State: August 2021 MPO: February 2022	
HSIP TSOP	Safety of Public Transit Systems	6. Total number of reportable transit fatalities 7. Reportable transit fatalities per RVM by mode <i>(examples below)</i> a. Motor bus b. Light rail c. etc. 8. Total number of reportable transit injuries 9. Reportable transit injuries per RVM by mode 10. Total number of reportable transit safety events 11. Reportable transit safety events per RVM by mode 12. Mean distance between major mechanical failures by mode	Annual	Operators: July 2021 MPO: January 2022	Federal guidance required transit operators to establish safety performance targets by July 20, 2020. This deadline was extended to July 20, 2021 due to COVID-19. MPOs will have 180 days after the establishment of the Safety Plan to establish regional targets.

FEDERAL GOALS & PROGRAMS	GENERAL MEASURES IN LAW	FINAL PERFORMANCE MEASURES	TARGET-SETTING FREQUENCY	TARGET-SETTING DUE DATES	CURRENT STATUS
Infrastructure Condition	Pavement Condition on the IHS	13. Percentage of pavements on the IHS in good condition 14. Percentage of pavements on the IHS in poor condition	Every 4 years	State: May 2022 MPO: November 2022	MTC supported State targets in 2018. One round of target-setting complete.
	Pavement Condition on the NHS	15. Percentage of pavements on the non-IHS NHS in good condition 16. Percentage of pavements on the non-IHS NHS in poor condition	Every 4 years	State: May 2022 MPO: November 2022	
	Bridge Condition on the NHS	17. Percentage of NHS bridges by deck area classified in good condition 18. Percentage of NHS bridges by deck area classified in poor condition	Every 4 years	State: May 2022 MPO: November 2022	
NHPP NTAMS	State of Good Repair for Public Transit Assets	19. Percentage of revenue vehicles that have met or exceeded their ULB by asset class (<i>example below</i>) a. Motor bus b. Light rail vehicle c. etc. 20. Percentage of facilities within a condition rating below fair by asset class (<i>example below</i>) a. Administrative and maintenance facilities b. Passenger facilities 21. Percentage of guideway directional route-miles with performance restrictions 22. Percentage of non-revenue vehicles that have met or exceeded their ULB	Annual	Operators: October 2021 MPO: April 2022	Operators set their 2021 targets in October 2020. MTC must set regional targets by April 2021. Four rounds of target-setting complete.
System Performance	Performance of the Interstate System	23. Percentage of person-miles traveled on the IHS that are reliable	Every 4 years	State: May 2022 MPO: November 2022	MTC supported State targets in 2018. One round of target-setting complete.
NHPP	Performance of the NHS	24. Percentage of person-miles traveled on the non-IHS NHS that are reliable 25. Percent change in NHS tailpipe CO₂ emissions compared to 2017 baseline (eliminated by FHWA in spring 2018)	Every 4 years	State: May 2022 MPO: November 2022	

FEDERAL GOALS & PROGRAMS	GENERAL MEASURES IN LAW	FINAL PERFORMANCE MEASURES	TARGET-SETTING FREQUENCY	TARGET-SETTING DUE DATES	CURRENT STATUS
Freight Movement and Economic Vitality NHFP	Freight Movement on the Interstate System	26. IHS truck travel reliability index	Every 4 years	State: May 2022 MPO: November 2022	MTC supported State targets in 2018. One round of target-setting complete.
Congestion Reduction CMAQ	Traffic Congestion	27. Annual hours of peak-hour excessive delay per capita by urbanized area <ul style="list-style-type: none"> a. San Francisco-Oakland UA b. San Jose UA c. Concord UA** d. Santa Rosa UA** e. Antioch UA** 28. Percent of non-SOV travel by urbanized area <ul style="list-style-type: none"> a. San Francisco-Oakland UA b. San Jose UA c. Concord UA** d. Santa Rosa UA** e. Antioch UA** ** = not required during 1 st target-setting cycle	Every 4 years	State: May 2022 MPO: November 2022 <i>Note that targets must be fully consistent with state targets; therefore the de facto target-setting deadline for both State and MPO is May 2022.</i>	State & MTC agreed upon targets in May 2018 for PHED and non-SOV travel. One round of target-setting complete.
Environmental Sustainability CMAQ	On-Road Mobile Source Emissions	29. Total emissions reductions from CMAQ-funded projects by pollutant <ul style="list-style-type: none"> a. PM_{2.5} b. PM₁₀ c. CO d. VOC e. NO_x 	Every 4 years	State: May 2022 MPO: November 2022	MTC set regional targets for on-road mobile emissions based on EMFAC regional emissions forecasts in 2018. One round of target-setting complete.
Reduced Project Delivery Delays	none	none (neither MAP-21 nor FAST included performance measures for this goal)	n/a	n/a	n/a

Attachment B: 2022 Target-Setting Methodology for Transit Safety

Overview:

The Public Transportation Agency Safety Plan (PTASP) final rule published by FTA in July 2018 established a requirement that certain transit operators that are recipients or sub-recipients of FTA grants develop safety plans that include processes and procedures necessary for implementing Safety Management Systems in accordance with MAP-21. The FTA administers the National Transit Database (NTD) as a resource for disseminating safety performance information. The rule contained new requirements for public transit providers and designated recipients such as MTC. The major requirements of the rule include:

1. Transit Safety Performance Targets –Targets must be set annually. The final rule establishes transit safety performance measures as shown below:

Measure	Definition
Total number of reportable transit fatalities	Number of fatalities reported to the NTD, excluding trespassing and suicide-related fatalities
Reportable transit fatalities per revenue vehicle mile by mode	Number of fatalities reported to the NTD, excluding trespassing and suicide-related fatalities, divided by vehicle revenue miles by mode
Total number of reportable transit injuries	Number of injuries reported to the NTD, excluding injuries resulting from assaults or other crimes
Reportable transit injuries per revenue vehicle mile by mode	Number of injuries reported to the NTD, excluding injuries resulting from assaults or other crimes, divided by vehicle revenue miles by mode
Total number of reportable transit safety events	Number of safety events, excluding security events, meeting a major event reporting threshold reported to the NTD
Reportable transit safety events per revenue vehicle mile by mode	Number of safety events, excluding security events, meeting a major event reporting threshold reported to the NTD divided by vehicle revenue miles by mode
Mean distance between major mechanical failures by mode	Mean distance between major mechanical failures reported to the NTD, where major mechanical failure is defined 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, by mode.

The final rule establishes the requirement to set targets by mode (i.e., bus, light rail, heavy rail) for certain performance measures.

2. Development of Public Transportation Agency Safety Plans (PTASP) – Most transit operators are required to develop a PTASP; operators that are regulated by the Federal Railroad Administration or U.S. Coast Guard and operators that do not receive Urbanized Area Formula Grant Program funds under 49 U.S.C. § 5307 (Section 5307 Grant Program) are exempt.
3. Reporting – Operators and MPOs must report annually to FTA on transit safety targets, performance, and progress made towards meeting set targets.

The PTASP Rule requires transit providers to set performance targets by July 20th of each year. Each MPO must establish targets no later than 180 days after the date on which the transit providers establish their performance targets. Therefore, staff developed targets to meet the year target-setting deadline of January 20th for transit safety performance measures.

Target-Setting Methodology:

To set transit safety targets, staff applied a similar operator-led approach as is done in regional target-setting for transit asset management performance measures. MTC staff collected target data from transit operator staff and rolled these targets up into regional averages. Performance measures that represent the target number of fatalities, injuries, or safety events were summed to generate the regional target. Performance measures that represent rates of fatalities, injuries, or safety events or miles between major mechanical failures were rolled up into a weighted average based on revenue vehicle miles.

In setting these targets, MTC staff worked with the region's transit operators that are required to develop PTASPs, which include agency-specific transit safety targets. Federal regulations require most transit operators to develop PTASPs and set transit safety targets, though operators that fall under the safety jurisdiction of the Federal Railroad Administration or the United States Coast Guard and operators that do not receive Urbanized Area Formula Grant Program funds under 49 U.S.C. § 5307 (Section 5307 Grant Program) are exempt. Six Bay Area transit operators meet those criteria: Caltrain, the San Francisco Bay Area Water Emergency Transportation Authority (WETA/San Francisco Bay Ferry), Sonoma-Marín Area Rail Transit (SMART), Altamont Corridor Express (ACE), Dixon REDI-Ride, and Rio Vista Delta Breeze.

Additionally, Golden Gate Transit reports performance targets only for their bus transit, not for their ferry transit. As a result, although the MTC region has several commuter rail and ferry operators, staff have not set performance targets for those modes.

The final rule does not specify whether targets or baseline performance should be reported using a single year of data or a rolling average of multiple years of data, instead leaving that decision at the discretion of the transit operators and MPOs. Given the substantive disruption of transit operations that occurred in 2020 due to the COVID-19 pandemic and ensuing Shelter-in-Place orders, a three-year rolling average of the latest available data from the NTD is used to measure baseline performance. For the number and rate of fatalities, number and rate of injuries, and number and rate of safety events, the average of data from 2018 through 2020 is used. For the mean distance between major mechanical failures, a rolling average of data from 2017 through 2019 is used, as 2020 data were not available. MTC has discretion to revisit this decision in future target-setting cycles.

Attachment C: 2022 Targets for Transit Safety

General Information

Goal	Transit Safety
Performance Measure(s)	<ul style="list-style-type: none"> • Total number of reportable transit fatalities • Reportable transit fatalities per revenue vehicle mile by mode • Total number of reportable transit injuries • Reportable transit injuries per revenue vehicle mile by mode • Total number of reportable transit safety events • Reportable transit safety events per revenue vehicle mile by mode • Mean distance between major mechanical failures by mode
Target(s) for Year	2022
Target(s) Deadline for MTC Approval	January 20, 2022

Current Conditions and Proposed Regional Targets

Measure	Mode	Baseline (2018-2020)*	Target (2022)
Total number of reportable transit fatalities	<i>Not Applicable</i>	9.3	0.0
Reportable transit fatalities per revenue vehicle mile by mode	Cable Car	0.0	0.0
	Commuter Bus	0.0	0.0
	Heavy Rail	0.0	0.0
	Hybrid Rail	0.0	0.0
	Light Rail	0.5	0.0
	Monorail	0.0	0.0
	Motor Bus	0.0	0.0
	Paratransit/Demand Responsive	0.0	0.0
	Streetcar	0.0	0.0
	Trolleybus	0.0	0.0

*Source: NTD data

Measure	Mode	Baseline (2018-2020)*	Target (2022)
Total number of reportable transit injuries	<i>Not Applicable</i>	766.3	546.4
Reportable transit injuries per revenue vehicle mile by mode	Cable Car	33.9	5.3
	Commuter Bus	1.6	0.7
	Heavy Rail	2.7	0.9
	Hybrid Rail	28.0	1.7
	Light Rail	6.0	4.6
	Monorail	4.6	3.1
	Motor Bus	5.2	5.7
	Paratransit/Demand Responsive	0.8	0.7
	Streetcar	10.5	2.7
	Trolleybus	16.5	6.9

*Source: NTD data

Measure	Mode	Baseline (2018-2020)*	Target (2022)
Total number of reportable transit safety events	<i>Not Applicable</i>	819.0	776.6
Reportable transit safety events per revenue vehicle mile by mode	Cable Car	11.0	5.3
	Commuter Bus	6.7	0.7
	Heavy Rail	229.7	0.1
	Hybrid Rail	4.3	0.8
	Light Rail	79.0	7.7
	Monorail	1.7	0.0
	Motor Bus	376.7	9.1
	Paratransit/Demand Responsive	18.3	2.3
	Streetcar	7.7	2.7
Trolleybus	80.0	6.9	

*Source: NTD data

Measure	Mode	Baseline (2017-2019)*	Target (2022)
Mean distance between major mechanical failures by mode	Cable Car	298.5	304.0
	Commuter Bus	9,221.1	13,000.0
	Heavy Rail	344,739.2	1,299,747.8
	Hybrid Rail	10,138.5	129,097.2
	Light Rail	1,962.5	19,721.9
	Monorail	190,775.5	388,591.0
	Motor Bus	8,211.3	24,951.3
	Paratransit/Demand Responsive	28,949.1	46,175.9
	Streetcar	608.8	545.0
	Trolleybus	5,304.8	7,855.0

*Source: NTD data. As 2020 data for this performance measure were not available from the NTD, baseline performance is reported for the period 2017-2019