Metropolitan Transportation Commission
Planning Committee

May 12, 2023 **Agenda Item 3b**

Federal Performance Target-Setting Update – May 2023

Subject:

Update on performance measures related to State of Good Repair for Transit Assets; Transit Safety; and Environmental Sustainability, including past performance and near-term targets.

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 (status 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 going forward.

This memorandum summarizes MTC's target-setting actions for State of Good Repair for Transit Assets; Transit Safety; and Environmental Sustainability, and presents the methodology and rationale used to arrive at the targets. This will be the sixth 1-year performance period for performance measures related to State of Good Repair for Transit Assets, and the second for performance measures related to Transit Safety. This will be the second 4-year performance period for performance measures related to Environmental Sustainability.

Issues:

Bay Area transit operators have been facing the effects of the COVID-19 pandemic for more than three years now, which has led to a significant decrease in operating revenues due to lower fare revenues and changes in travel patterns. Despite this, the State of Good Repair for Transit

Assets has not yet been significantly affected since capital funding sources have not been negatively impacted, and some asset procurements are either underway or fully funded. However, the situation could change if local capital funding becomes scarce in the coming years. The ongoing effects of the pandemic on traveler behavior and transit revenues make it difficult to forecast near-term performance, posing a significant challenge for MPOs in setting achievable regional targets. While this is not unique to the Bay Area, federal regulations mandate that these targets must be regularly updated, and MPOs are not penalized for failing to meet them.

Next Steps:

In winter 2024, MTC will undertake the next round of target-setting for federal performance measures, starting with Safety measures. This will be followed by target-setting for Transit Safety and State of Good Repair for Transit Assets in spring 2024. MTC will also continue to monitor regional performance for all federal performance measures.

Attachments:

- Attachment A: List of Federally Required Performance Measures
- Attachment B: 2023 Target-Setting Summary: State of Good Repair for Transit Assets
- Attachment C: 2023 Targets for State of Good Repair for Transit Assets
- Attachment D: 2023 Target-Setting Methodology for Transit Safety
- Attachment E: 2023 Targets for Transit Safety
- Attachment F: 2023 Target-Setting Summary: Environmental Sustainability
- Attachment G: 2025 Targets for Environmental Sustainability

Andrew B. Fremier

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: **in August** MPO: **in February**	MTC set the 2023 targets in February 2023. Six rounds of target-setting complete.
	Rate of Fatalities on Roads	**2. Road fatalities per 100 million vehicle miles traveled**	Annual	State: **in August** MPO: **in February**	
	Number of Serious Injuries on Roads	**3. Total number of serious injuries on roads**	Annual	State: **in August** MPO: **in February**	
	Rate of Serious Injuries on Roads	**4. Serious injuries on roads per 100 million vehicle miles traveled**	Annual	State: **in August** MPO: **in February**	
	Non-Motorized Safety on Roads	**5. Combined total number of non-motorized fatalities and serious injuries**	Annual	State: **in August** MPO: **in February**	

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
	Safety of Public Transit Systems	**6. Total number of reportable transit fatalities** **7. Reportable transit fatalities per revenue vehicle miles by mode** *(example below)* *a. Motor bus* *b. Light rail* *c. etc.* **8. Total number of reportable transit injuries** **9. Reportable transit injuries per revenue vehicle miles by mode** **10. Total number of reportable transit safety events** **11. Reportable transit safety events per revenue vehicle miles by mode** **12. Mean distance between major mechanical failures by mode**	Annual	Operators: **in July** MPO: **in January**	MTC set the 2023 targets in April 2023. Two rounds of target-setting complete.
Infrastructure Condition	Pavement Condition on	**13. Percentage of pavements on the Interstate Highway System in good condition**	Every 4 years	State: **May 2022** MPO: **November 2022**	MTC set the 2025 targets

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
	the Interstate Highway System	**14. Percentage of pavements on the Interstate Highway System in poor condition**			in February 2023. Two rounds of target-setting complete.
	Pavement Condition on the National Highway System	**15. Percentage of pavements on the non-Interstate National Highway System in good condition** **16. Percentage of pavements on the non-Interstate National Highway System in poor condition**	Every 4 years	State: **May 2022** MPO: **November 2022**	
	Bridge Condition on the National Highway System	**17. Percentage of National Highway System bridges by deck area classified in good condition** **18. Percentage of National Highway System bridges by deck area classified in poor condition**	Every 4 years	State: **May 2022** MPO: **November 2022**	
	State of Good Repair for	**19. Percentage of revenue vehicles that have met or exceeded their useful life benchmark by asset class** *(example below)*	Annual	Operators: **in October** MPO: **in April**	MTC set the 2023 targets in April 2023.

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
	Public Transit Assets	*a. Motor bus* *b. Light rail vehicle* *c. etc.* **20. Percentage of facilities within a condition rating below fair by asset class** *(example below)* *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 useful life benchmark**			Five rounds of target-setting complete.
System Performance	Performance of the Interstate System	**23. Percentage of person-miles traveled on the Interstate Highway System that are reliable**	Every 4 years	State: **December 2022** MPO: **June 2023**	MTC set the 2025 targets in February

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
	Performance of the National Highway System	**24. Percentage of person-miles traveled on the non-Interstate National Highway System that are reliable** **25.** ~~Percent change in National Highway System tailpipe CO_2 emissions compared to 2017 baseline~~ *(eliminated by FHWA in spring 2018)*	Every 4 years	State: **December 2022** MPO: **June 2023**	2023. Two rounds of target-setting complete.
Freight Movement and Economic Vitality	Freight Movement on the Interstate System	**26. Interstate Highway System truck travel reliability index**	Every 4 years	State: **December 2022** MPO: **June 2023**	MTC set the 2025 targets in February 2023. Two rounds of target-setting complete.
Congestion Reduction	Traffic Congestion	**27. Annual hours of peak-hour excessive delay per capita by urbanized area** *a. San Francisco-Oakland UA*	Every 4 years	State: **December 2022** MPO: **June 2023**	MTC set the 2025 targets in February 2023. Two

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
		b. San Jose UA *c. Concord UA*** *d. Santa Rosa UA*** *e. Antioch UA*** **28. Percent of non-single occupant vehicle travel by urbanized area** *a. San Francisco-Oakland UA* *b. San Jose UA* *c. Concord UA*** *d. Santa Rosa UA*** *e. Antioch UA*** ** = not required during 1st target-setting cycle			rounds of target-setting complete.
Environmental Sustainability	On-Road Mobile Source Emissions	**29. Total emissions reductions from Congestion Mitigation and Air Quality (CMAQ) Improvement Program funded projects by pollutant**	Every 4 years	State: **December 2022** MPO: **June 2023**	MTC set the 2025 targets in May 2023. Two rounds of

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
		a. $PM_{2.5}$ b. PM_{10} c. *CO* d. *VOC* e. NO_x			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

2023 Target-Setting Summary: State of Good Repair for Transit Assets

Overview

The transit asset management (TAM) final rule published by FTA in July 2016 established a National TAM System in accordance with MAP-21. The rule contained new requirements for public transit providers, and designated recipients such as MTC. The major requirements of the rule include:

1) **State of Good Repair Performance Targets** – Targets must be set for each applicable asset including Rolling Stock, Equipment, Infrastructure, and Facilities. The final rule establishes state of good repair standards and performance measures as shown below:

Asset Category	Performance Measure
Rolling Stock: All revenue vehicles	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their Useful Life Benchmark (ULB)
Facilities: All buildings or structures and parking facilities	Percentage of facilities within an asset class, rated below condition 3 (fair or adequate) on FTA's Transit Economic Requirements Model (TERM) scale
Infrastructure: Only rail fixed guideway, tracks, signals and systems	Percentage of guideway directional route-miles with performance restrictions
Equipment: Only non-revenue vehicles (e.g., maintenance, administrative, or training)	Percentage of non-revenue vehicles that have either met or exceeded their ULB

In the case of rolling stock and facilities, the major asset categories are further broken down into distinct asset classes, with targets required for each asset class. Facilities are separated into administrative and maintenance facilities and passenger facilities, while revenue vehicles are separated into 18 sub-categories (e.g., light rail vehicle, bus, ferry, etc.)

Note that over time some targets improve relative to existing performance measures if there is funding available to replace or repair assets that are in poor condition. On the other hand, if there

is no funding available to replace or repair assets, targets can worsen due to these assets aging another year and exceeding their useful lives.

2) **Development of TAM Plans** – Tier I operators (rail operators and any operators with 101 or more vehicles) must do their own TAM plan consisting of nine required elements. Tier II operators (operators with 100 vehicles or less) may do their own plan or participate in a group plan. There are only four required elements to the TAM plan for Tier II operators.
3) **Reporting –** Operators must report annually to FTA on state of good repair targets, asset conditions, and progress made towards meeting set targets.

The TAM Rule required transit providers to set State of Good Repair for Transit Assets performance targets by October 1st of each year. The Planning Rule requires that each MPO 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 2023 target-setting deadline of April 1st for State of Good Repair for Transit Assets.

Target-Setting Approach and Rationale

To set State of Good Repair for Transit Assets performance targets, MTC staff assessed the current condition of operators' assets using data from the Regional Transit Capital Inventory (RTCI). The RTCI is a comprehensive regional database of the transit assets that are owned by transit agencies across the region. MTC developed the RTCI in order to collect consistent and comparable data on the region's transit capital assets and associated replacement and rehabilitation costs from each operator.

To set the target for each asset category, MTC staff provided each operator with existing performance measures (by asset class) for their asset inventory included in the RTCI and requested that each operator conduct an analysis of expected funding from all sources for the coming fiscal year that will be used to repair or replace transit assets. Operators used this assessment to predict which vehicle assets would be replaced or repaired and presented MTC with a target percentage of assets expected not to be in a state of good repair by the end of the fiscal year.

Staff worked with the operators to keep the targets realistic and to base them on reasonable financial projections. For vehicles and infrastructure, MTC staff consolidated the targets for all

operators to identify a regional target for each asset class. With respect to facilities, prior targets had been set using the age of the facility as a proxy for its condition to determine the percentage of all regional transit facilities assets estimated to be out of a state of good repair. Operators' methodology has improved in the last couple of years due to new TAM Plan requirements. Operators are required to conduct physical inspections of their facilities to determine their condition rather than relying on the age of the facilities alone. As a result, most of the facilities' targets reflect the actual condition of the assets.

Review of 2022 Performance

The Bay Area met its performance targets for non-revenue vehicles, while it fell short of its target for revenue vehicles, facilities, and infrastructure. As current federal regulations stand, there is no penalty for not meeting the 2022 targets.

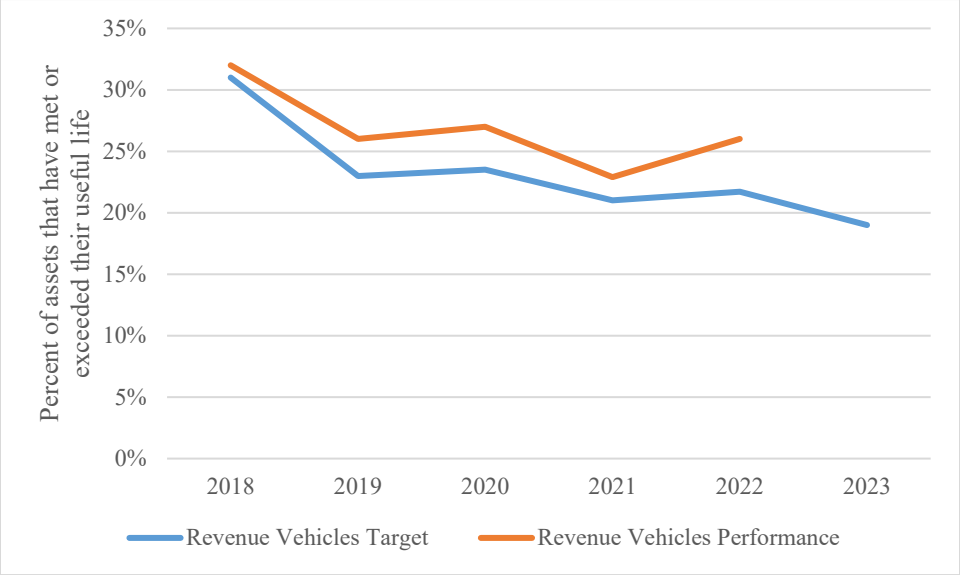

Figure 1: Revenue vehicles State of Good Repair for Transit Assets targets and performance

Over the past four years, the share of revenue vehicles that are not in a state of good repair has decreased, reflecting MTC's regional priority to replace such vehicles. This trend is evident in Figure 1. In 2022, approximately 26 percent of revenue vehicles met or exceeded their useful lives, which exceeds the 22 percent target for that year, but represents a decrease from the 32 percent figure in 2018. The fleet replacements, including BART's Fleet of the Future and SFMTA's new Light Rail Vehicles, have been instrumental in this improvement. The 2023 target anticipates further improvement in the condition of revenue vehicle assets over the next year.

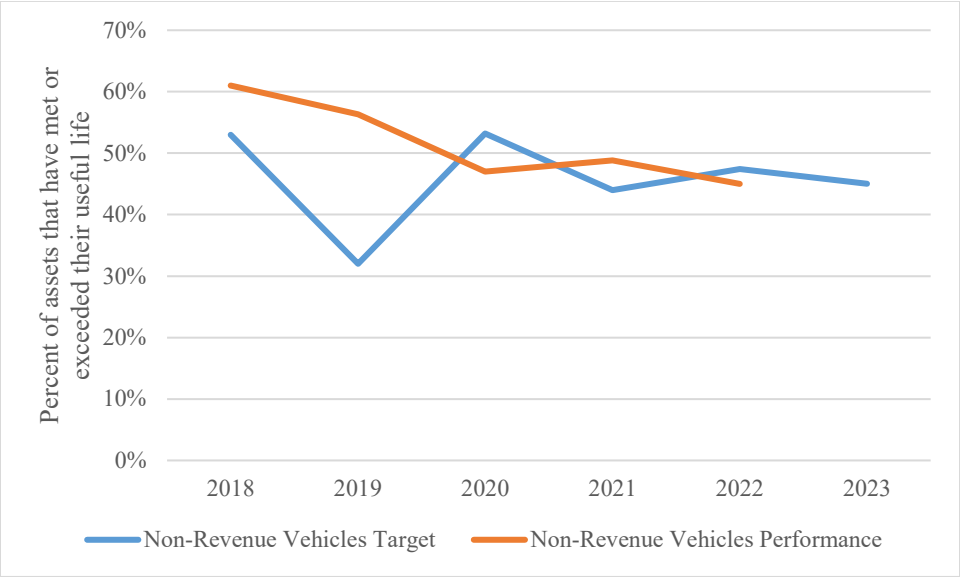

Figure 2: Non-revenue vehicles State of Good Repair for Transit Assets targets and performance

Similarly, the share of non-revenue vehicles that have exceeded their useful life has decreased over the last four years. This trend is illustrated in Figure 2, below. The target for 2023 assumes that this condition will remain relatively stable over the coming year.

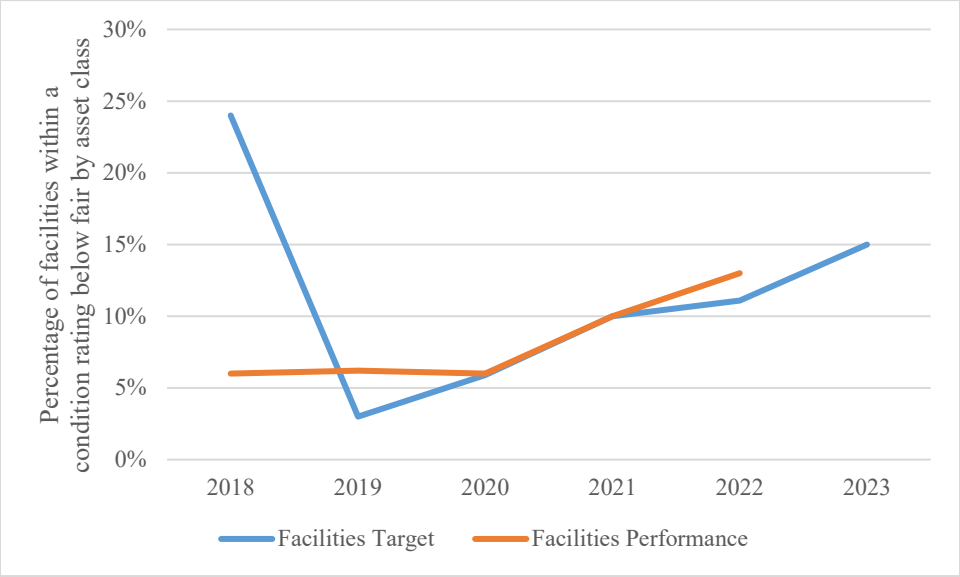

Figure 3: Factilities State of Good Repair for Transit Assets targets and performance

Between 2021 and 2022, the condition of facilities deteriorated, and approximately 13 percent of facilities scored below 3 on FTA's TERM facility condition rating scale, as depicted in Figure 3. The condition of facilities is projected to decline slightly in the next year.

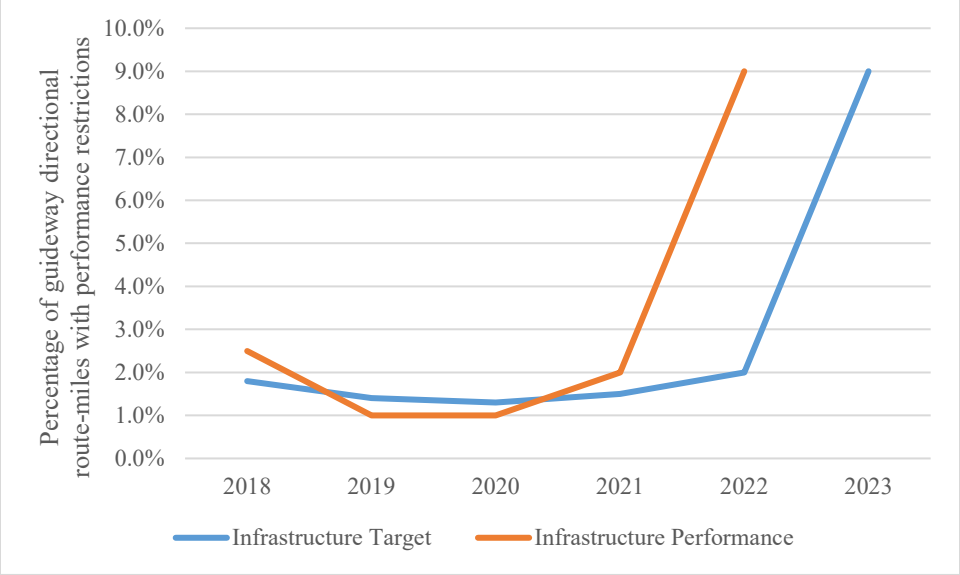

Figure 4: Infrastructure State of Good Repair for Transit Assets targets and performance

In 2022, the region did not achieve its guideway target, as depicted in Figure 4. The percentage of route directional miles with speed or operational restrictions rose from 2 percent to 9 percent between 2021 and 2022, exceeding the target of 2 percent. An analysis of funding availability and asset maintenance needs suggests that performance is likely to remain stable from 2022 to 2023, with a target of 9 percent in 2022 reflecting a realistic expectation for performance. It is worth noting that SFMTA presently has 50 percent of its guideway under a performance restriction, which is a significant factor contributing to the overall performance decline across the region.

Since 2020, funding sources for transit operations have been severely impacted by COVID-19 and the resulting changes in travel demand. However, capital funding sources have remained stable over the past two years. As a result, the performance of State of Good Repair for Transit Assets did not suffer significant adverse effects between 2020 and 2022, as funding for capital maintenance and asset replacement remained mostly intact. MTC will continue to monitor transit capital funding and asset condition over the next few years, but for the time being, the situation remains stable.

Summary of Proposed Targets

MTC set State of Good Repair for Transit Assets targets for 2023, which are summarized in Table 1 and outlined in **Attachment C**.

Table 1: State of Good Repair for Transit Assets targets and performance

Asset Category	2022 Target	2022 Performance	2023 Target
Revenue Vehicles	22%	26%	19%
Facilities	11%	13%	15%
Guideway	2%	9%	9%
Non-Revenue Vehicles	47%	45%	45%

Data source: Regional Transit Capital Inventory (RTCI) & operators' targets

MTC expects the state of repair for revenue vehicles to improve due to vehicle and rolling stock replacements at the operator level. However, non-revenue vehicles are expected to remain at the same levels as in 2022, with around 45 percent of these vehicles not in good repair, reflecting a lower priority placed on these vehicles in MTC's transit capital priorities policy.

As of 2022, the majority of the region's facilities and guideway were in good repair, with 13 percent of facilities and 9 percent of guideway miles not in good repair. The state of good repair for the region's guideway assets is expected to remain constant over the coming year. However, the condition of facilities is expected to slightly worsen based on current asset condition and funding levels, with the target for 2023 being 14 percent not in good repair.

2023 Targets for State of Good Repair for Transit Assets

General Information

Goal	**Infrastructure Condition**
Performance Measure(s)	• Percentage of revenue vehicles that have met or exceeded their useful life benchmark (ULB) by asset class • Percentage of facilities with a condition rating below fair by asset class • Percentage of guideway directional route-miles with performance restrictions • Percentage of non-revenue vehicles that have met or exceeded their ULB
Target(s) for Year	2023
Target(s) Deadline for MTC Approval	April 1, 2023

Past Targets & Past Performance

Measure	**Subcategory**	**Current (2022)**	**Target (2023)**	**Total # (2022)**	**Measure ID**
Percentage of revenue vehicles that have met or exceeded their ULB	Articulated bus	4%	0%	457	US-19a
	Automated guideway vehicle	0%	0%	4	US-19b
	Automobile	66%	60%	96	US-19c
	Bus	25%	21%	2,157	US-19d
	Cable car	0%	0%	36	US-19e

Measure	Subcategory	Current (2022)	Target (2023)	Total # (2022)	Measure ID
	Commuter rail – locomotive	51%	51%	39	US-19f
	Commuter rail – passenger coach	44%	44%	165	US-19g
	Commuter rail – self-propelled passenger car	0%	0%	34	US-19h
	Cutaway bus	15%	11%	712	US-19i
	Double decker bus	0%	0%	18	US-19j
	Ferryboat	22%	14%	22	US-19k
	Heavy rail	63%	43%	781	US-19l
	Light rail	0%	0%	356	US-19m
	Minivan	80%	24%	109	US-19n
	Over-the-road bus	16%	10%	118	US-19o
	Trolley bus	0%	0%	278	US-19p
	Van	4%	8%	104	US-19q
	Vintage trolley	100%	100%	1	US-19r
Percentage of facilities with a condition rating below fair	Administrative and maintenance facilities	13%	14%	N/A	US-20a
	Passenger facilities	13%	15%	N/A	US-20b

Measure	Subcategory	Current (2022)	Target (2023)	Total # (2022)	Measure ID
Percentage of guideway directional route-miles with performance restrictions	n/a	9%	9%	N/A	US-21
Percentage of non-revenue vehicles that have met or exceeded their ULB	n/a	45%	45%	2,032	US-22

Data source: Regional Transit Capital Inventory (RTCI) & operators' targets

2023 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 miles (RVM) by mode	Number of fatalities reported to the NTD, excluding trespassing and suicide-related fatalities, divided by RVM 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 RVM by mode	Number of injuries reported to the NTD, excluding injuries resulting from assaults or other crimes, divided by RVM 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 RVM by mode	Number of safety events, excluding security events, meeting a major event reporting threshold reported to the NTD divided by RVM 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 only receive financial assistance under the 5310 and 5311 formula grant programs 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 annually, on a schedule determined by the provider. Each MPO must establish targets no later than 180 days after the date on which the transit providers establish their performance targets. MTC received providers' performance targets during January and February of 2023. The final performance targets were received on February 21, 2023.

Target-Setting Methodology:

MTC staff used an operator-led approach to set Transit Safety targets, similar to the approach used for setting regional targets for State of Good Repair for Transit Assets performance targets. To determine the targets, MTC staff collected data from transit operator staff and used a weighted average based on RVM to generate regional performance targets. MTC staff also worked closely with operators to ensure that the targets were realistic.

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, leaving that decision to transit operators and MPOs. However, due to the significant impact of the COVID-19 pandemic on transit operations in 2020, 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, serious injuries, and safety events, the average of data from 2020 through 2022 is used. For the mean distance between mechanical failures, a rolling average of data from 2019 through 2021 is used. MTC may revisit this decision in future target-setting cycles.

2023 Targets for Transit Safety

General Information

Goal	**Transit Safety**
Performance Measure(s)	• Total number of reportable transit fatalities • Reportable transit fatalities per revenue vehicle mile (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
Target(s) for Year	2023
Target(s) Deadline for MTC Approval	July 21, 2023

Current Conditions and Proposed Regional Targets

Measure	**Mode**	**Baseline (2020-2022)**	**Target (2023)**
Total number of reportable transit fatalities	Not Applicable	12	0.00
Reportable transit fatalities per million revenue vehicle miles (RVM) by mode	Cable Car	0.00	0.00
	Commuter Bus	0.00	0.00
	Heavy Rail	0.06	0.00
	Hybrid Rail	0.00	0.00
	Light Rail	1.04	0.00

Measure	Mode	Baseline (2020-2022)	Target (2023)
	Monorail	0.00	0.00
	Motor Bus	0.04	0.00
	Paratransit/Demand Responsive	0.00	0.00
	Streetcar	0.00	0.00
	Trolleybus	0.00	0.00
Total number of reportable transit injuries	Not Applicable	531	388
Reportable transit injuries per million RVM by mode	Cable Car	14.18	3.51
	Commuter Bus	2.87	0.00
	Heavy Rail	3.21	0.77
	Hybrid Rail	1.67	3.10
	Light Rail	4.02	2.77
	Monorail	4.41	2.57
	Motor Bus	4.28	3.59
	Paratransit/Demand Responsive	0.75	1.12
	Streetcar	41.28	0.00
	Trolleybus	9.97	0.00
Total number of reportable transit safety events	Not Applicable	641	572
	Cable Car	21.27	35.11

Measure	Mode	Baseline (2020-2022)	Target (2023)
Reportable transit safety events per million RVM by mode	Commuter Bus	2.50	0.00
	Heavy Rail	3.99	0.13
	Hybrid Rail	1.95	1.55
	Light Rail	12.23	9.08
	Monorail	4.41	0.00
	Motor Bus	4.36	7.05
	Paratransit/Demand Responsive	0.79	2.65
	Streetcar	89.74	7.66
	Trolleybus	9.30	4.04
Mean distance between major mechanical failures by mode	Cable Car	576	319
	Commuter Bus	17,498	12,264
	Heavy Rail	413,804	1,299,752
	Hybrid Rail	69,686	129,097
	Light Rail	6,366	19,807
	Monorail	132,718	388,584
	Motor Bus	14,364	33,848
	Paratransit/Demand Responsive	43,725	43,358
	Streetcar	1,405	572
	Trolleybus	11,890	8,641

Source: NTD data, years 2019-2021

2023 Target-Setting Summary: Environmental Sustainability

Overview:

FHWA's final rule established one performance measure with multiple sub-parts to assess environmental sustainability, imposing new requirements on both State DOTs and MPOs. The key requirements of the rule for environmental sustainability are:

1) **Environmental Sustainability Targets** –

Measure	Definition
Total emissions reductions from Congestion Mitigation and Air Quality (CMAQ) Improvement Program funded projects by pollutant a. $PM_{2.5}$ b. PM_{10} c. CO d. VOC e. NO_x	Total emissions reductions for Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Volatile Organic Compounds (VOCs), Particulate Matter ($PM_{2.5}$ and PM_{10}) for CMAQ-funded projects in designated nonattainment and maintenance areas in kilograms per day.

Federal regulations mandate that MPOs in nonattainment and maintenance areas that overlap with urbanized areas exceeding one million people set their own two-year and four-year regional targets for this performance measure. MPOs not meeting this requirement may either support four-year state targets or set quantifiable regional four-year targets every four years.

2) **Reporting** – State DOTs are required to submit a report at the start of each performance period that outlines nonattainment and maintenance area boundaries, baseline conditions, and targets. They must also submit progress reports at the midpoint and end of the performance period. MPOs must submit targets to their respective State DOTs in a manner that is documented and mutually agreed upon by both parties. MPOs must also

include baseline levels and progress towards targets in their Regional Transportation Plan and provide a CMAQ Performance Plan in State Biennial Performance Reports.

3) **Evaluation –** According to federal regulations, there is no requirement for a significant progress determination for the CMAQ On-Road Mobile Source Emissions performance.

MPOs are required to establish their 2023 and 2025 targets for Environmental Sustainability by June 14, 2023, 180 days after the state DOT requirement.

Target-Setting Approach and Rationale

The Environmental Sustainability performance target set by MTC is based on the expected daily reductions in emissions from projects that will use CMAQ (Congestion Mitigation and Air Quality Improvement) funds to implement the project over the next two to four years. To set the emissions reduction target, MTC staff estimated the daily reduction in pollutants and precursors from CMAQ projects that are likely to be implemented in the next four years, based on the expected amount of CMAQ funding for the region and the types of projects expected to be awarded CMAQ funds.

MTC has updated its methodology for estimating emissions reductions for CMAQ projects before the second target setting deadline. The revised approach relies on emissions calculator tools specific to different project types, such as the FHWA's CMAQ Emissions Calculator Toolkit, the Atlanta Regional Council's Congestion Mitigation and Air Quality Calculator Tool, and CARB's Methods to Find the Cost-Effectiveness of Funding Air Quality Projects Tool. Due to this shift in methodology, it may be difficult or impossible to make direct comparisons to the baseline.

Overall, MTC staff expects that the Bay Area's emissions reduction performance will decrease over time due to the eventual retirement of older, more polluting vehicles.

2025 Targets for Environmental Sustainability

General Information

Goal	**Environmental Sustainability**
Performance Measure(s)	Total emissions reductions from CMAQ-funded projects by pollutant a. $PM_{2.5}$ b. PM_{10} c. CO d. VOC e. NO_x
Target(s) for Year	2023, 2025
Target(s) Deadline for MTC Approval	June 14, 2023

Current Conditions and Proposed Targets

Measure (kg/day)	Baseline* (2018-2021)	Target (2023)	Target (2025)	Measure ID
Total emissions reductions from CMAQ-funded projects by pollutant ($PM_{2.5}$)	101.35	0.23	0.46	29(a)
Total emissions reductions from CMAQ-funded projects by pollutant (PM_{10})	207.9	0.07	0.15	29(b)
Total emissions reductions from CMAQ-funded projects by pollutant (CO)	14,916.98	23.14	37.96	29(c)

Measure (kg/day)	Baseline* (2018-2021)	Target (2023)	Target (2025)	Measure ID
Total emissions reductions from CMAQ-funded projects by pollutant (VOC)	1,258.04	3.49	5.94	29(d)
Total emissions reductions from CMAQ-funded projects by pollutant (NO_x)	1,823.99	5.33	8.00	29(e)

*****MTC revised its methodology for estimating project-level emissions reductions for CMAQ projects ahead of the second target setting deadline. However, the emissions reductions from 2018-2021 were estimated using the previous methodology, which were based on state-level TCMs from state plans.