

Metropolitan Transportation Commission Planning Committee

January 8, 2021

Agenda Item 4b

Federal Performance Target-Setting Update – January 2021

Subject: Update on federally-required Road Safety regional performance targets for the year 2021.

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, thus increasing accountability and transparency of Federal programs while also moving toward a performance-based planning and programming paradigm. This memo summarizes MTC target-setting actions for Road Safety and presents the methodology and rationale used to arrive at the targets.

Under MTC Resolution No. 4295, adopted in June 2017, the MTC 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.

Through the Transportation Performance Management 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 (**Attachment A**). Federal regulation requires targets to be set on varying performance cycles ranging from once every year to once every four years.

Target-Setting Methodology

This will be the fourth round of Road Safety target-setting for Caltrans and MTC. MPOs are required to either support State targets or set regional targets for federally-mandated performance measures for Road Safety by February 2021. This memo summarizes MTC target-setting actions and presents the methodology used to arrive at the targets. As detailed in **Attachment B** and **Attachment C**, staff propose setting targets using a Vision Zero framework, where targets are set based on a linear decline to zero fatalities and zero serious injuries in the year 2030. MTC has used this methodology for the past two target-setting cycles.

Issues:

While over 400 fatalities and 2,000 serious injuries occur on the region's roads each year, current and future projects and policies at the local and regional level underscore a commitment to swiftly improving safety conditions. At the regional level, MTC adopted MTC Resolution No. 4400 in June 2020, establishing a Regional Safety/Vision Zero Policy. The resolution affirmed MTC's commitment to working collaboratively with partner agencies at the county and local levels to encourage and support equitable and data-driven actions achieving the target of eliminating traffic fatalities and serious injuries in the Bay Area by 2030 (**Attachment D**). Following the adoption of the Regional Safety/Vision Zero Policy, MTC has procured a consultant to build out a regional safety data system, which will serve as a clearinghouse for local jurisdictions seeking to make data-driven decisions on where to prioritize safety projects.

Additionally, strategies to advance road safety have been integrated into the Plan Bay Area 2050 Final Blueprint, approved for analysis in September 2020. These strategies include speed limit reductions on freeways and local streets and a significant expansion of infrastructure for cyclists and pedestrians. While the strategies advanced in the Plan Bay Area 2050 Final Blueprint are not forecasted to fully eliminate fatalities and serious injuries, they do result in thousands fewer fatalities and serious injuries over the 30-year planning horizon. At the local level, several jurisdictions, including the region's three largest cities, have adopted Vision Zero policies, affirming their commitment to ending road fatalities and serious injuries.

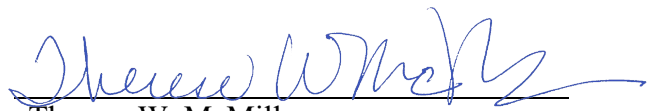
Progress toward targets will be reviewed during MTC's biannual certification review with the Federal Highway Administration, though there are no ramifications for not meeting regional targets at this time.

Next Steps:

Updated Road Safety targets will be posted on Vital Signs, where progress toward achieving targets is updated on an annual basis. The next round of target-setting for federal performance measures will occur in April 2021, where MTC will set its fifth round of targets for State of Good Repair of Transit Assets.

Attachments:

Attachment A: List of Federally-Required Performance Measures
Attachment B: 2021 Target-Setting Summary: Road Safety
Attachment C: 2021 Targets for Road Safety
Attachment D: MTC Resolution No. 4400, Regional Safety/Vision Zero Policy


Therese W. McMillan

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 HSIP TSOP	Number of Fatalities on Roads	1. Total number of road fatalities	Annual	State: annually in August MPO: annually in February	Caltrans set its 2021 targets in August 2020. MTC must set regional targets by February 2021. Three rounds of target-setting complete.
	Rate of Fatalities on Roads	2. Road fatalities per 100M VMT	Annual	State: annually in August MPO: annually in February	
	Number of Serious Injuries on Roads	3. Total number of serious injuries on roads	Annual	State: annually in August MPO: annually in February	
	Rate of Serious Injuries on Roads	4. Serious injuries on roads per 100M VMT	Annual	State: annually in August MPO: annually in February	
	Non-Motorized Safety on Roads	5. Combined total number of non-motorized fatalities and serious injuries	Annual	State: annually in August MPO: annually in February	
	Safety of Public Transit Systems	6. Total number of reportable transit fatalities	Annual	Operators: July 2021 MPO: January 2022	Federal guidance required transit operators to establish a Public Transportation Agency Plan, including safety performance targets, by July 20, 2020. Due to extraordinary circumstances facing transit operators, this deadline was extended to July 20, 2021. MPOs will have 180 days after the establishment of the Safety Plan to establish regional targets.
		7. Reportable transit fatalities per RVM by mode <i>(example 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 <i>(example below)</i> a. Motor bus b. Light rail c. etc.			
		10. Total number of reportable transit safety events			
		11. Reportable transit safety events per RVM by mode <i>(example below)</i> a. Motor bus b. Light rail c. etc.			
		12. Mean distance between major mechanical failures by mode <i>(example below)</i> a. Motor bus b. Light rail c. etc.			

FEDERAL GOALS & PROGRAMS	GENERAL MEASURES IN LAW	FINAL PERFORMANCE MEASURES	TARGET-SETTING FREQUENCY	TARGET-SETTING DUE DATES	CURRENT STATUS
Infrastructure Condition NHPP NTAMS	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	
	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: annually in October MPO: annually in April	Operators set their 2021 targets in October 2020. MTC must set regional targets by April 2021. Four rounds of target-setting complete.
System Performance NHPP	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.
	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 2021 MPO: November 2021 <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 2021.</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	<i>none</i>	<i>none</i> (neither MAP-21 nor FAST included performance measures for this goal)	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

2021 Target-Setting Summary: Roadway Safety

Overview

The final rule from FHWA established five performance measures to assess performance for Road Safety. The rule contained new requirements for State DOTs and MPOs. The major requirements of the rule related to safety are:

- 1) **Safety Targets** – The final rule established five performance measures to assess progress towards the safety goal, defined as such:

Measure	Definition
Number of fatalities	The number of people involved in a crash with the outcome fatal injury.
Rate of fatalities per 100 million vehicle miles traveled	The number of people involved in a crash with the outcome fatal injury, divided by the number of vehicle miles traveled on roads within the jurisdiction in hundreds of millions of miles.
Number of serious injuries	The number of people involved in a crash with the outcome suspected serious injury.
Rate of serious injuries per 100 million vehicle miles traveled	The number of people involved in a crash with the outcome suspected serious injury, divided by the number of vehicle miles traveled on roads within the jurisdiction in hundreds of millions of miles.
Number of non-motorized fatalities and non-motorized serious injuries	The number of pedestrians or cyclists involved in a crash with the outcome fatal injury or suspected serious injury.

State DOTs must set numerical targets and MPOs must support State targets or set numerical regional targets annually for each of the five safety targets to comply with the regulation.

- 2) **Reporting** – State DOTs must submit a report at the start of each performance period summarizing baseline conditions and targets. Additionally, State DOTs must submit progress reports at the midpoint and end of the performance period. MPOs and State DOTs must agree on reporting process as part of their Metropolitan Planning Agreements, though federal regulation does not require separate reports to be submitted to FHWA.
- 3) **Evaluation** – A State DOTs is said to have made “significant progress” if it meets four out of five safety performance targets or if performance is better than baseline data for four out of five safety performance targets. FHWA will assess an MPO’s progress as part of ongoing transportation planning process reviews. If an MPO does not meet or achieved its targets, the MPO is encouraged to develop a statement that describes how the MPO will work with the State and other partners to meet targets during the next performance period.

MPOs are required to establish their 2021 targets for safety by February 26, 2021, 180 days after the state DOT requirement.

Per federal guidelines, baseline and target performance are both reported as 5-year rolling averages, meaning baseline performance represents the average of the years 2014-2018 and the targets represent the years 2017-2021.

Target-Setting Methodology

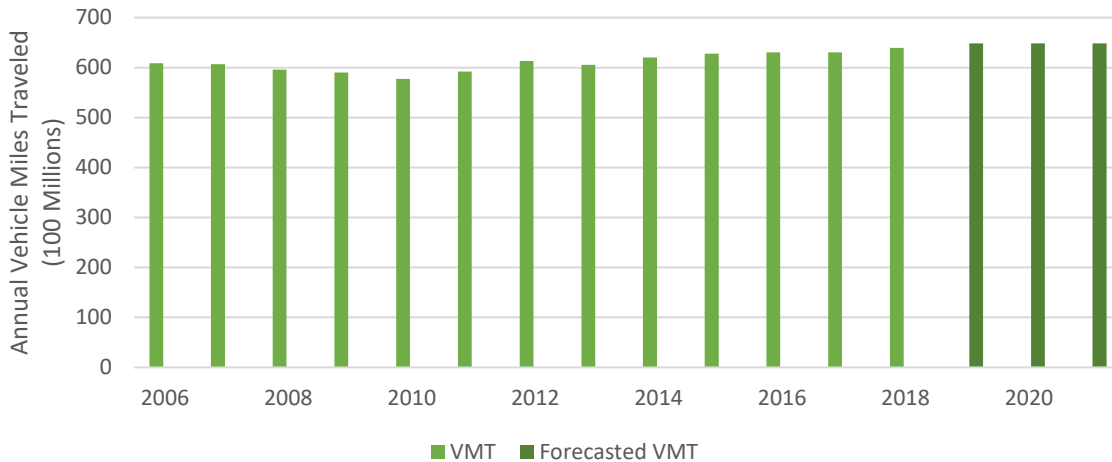
Given the Bay Area's commitment to advancing road safety and the ongoing initiatives that seek to bend the curve of fatalities and serious injuries toward zero, MTC opted to set aspirational targets in line with Vision Zero, an approach the agency has taken over the past two target-setting cycles. Such initiatives include the adoption of the Resolution 4400, establishing a Regional Safety/Vision Zero Policy, the initiation of the development of a regional safety data system, and ongoing work to support local jurisdictions through technical assistance and information-sharing networks. Under MTC's Vision Zero-based target-setting methodology, road safety targets were set based on a linear decline toward zero fatalities and serious injuries in the year 2030 starting in 2019.

This methodology differs from the methodology used by Caltrans to set targets at the state level, which sets targets based on the observed trends in fatalities and serious injuries. Under the Caltrans framework, the observed percentage change in fatalities or serious injuries between 2017 and 2018 is assumed to continue in perpetuity, with targets set based on the forecasted number of fatalities and serious injuries. Statewide targets were set based on an annual decrease in number of fatalities of 2.9 percent over the previous year, an annual decrease in number of serious injuries of 1.3 percent over the previous year, and an annual decrease of 2.9 percent of non-motorized fatalities and 1.3 percent of non-motorized serious injuries over the previous year. In comparison, targets for the Bay Area were set based on an annual decline of 8 percent of the 2018 value for fatalities, serious injuries, and non-motorized fatalities and serious injuries.

A substantial time lag exists in the publishing of crash data due to the time-intensive process of collecting data from various reporting agencies and preparing data for public consumption. Final data for fatalities and serious injuries are available through 2018 from the Fatality Analysis Reporting System (FARS) and the Statewide Integrated Traffic Records System (SWITRS), respectively. While some data on the number of serious injuries for 2019 and 2020 are available from SWITRS, they are considered provisional, and fatality data for 2019 or 2020 are not yet available from FARS. As such, the regional targets are set using 2018 as a baseline, in line with the methodology used by Caltrans. Additionally, since MTC supported state targets in 2018, there is no quantitative regional target to which observed 2018 road safety performance may be compared. Starting in 2019, MTC will be able to compare its regional performance to targets.

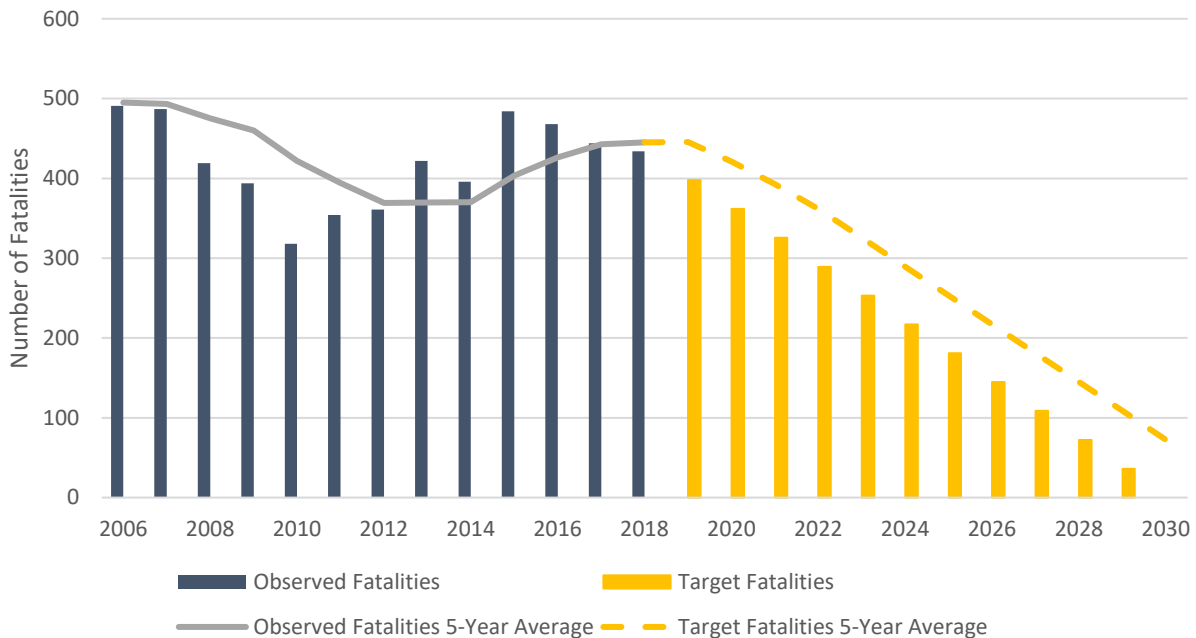
Annual vehicle miles traveled (VMT) data are used to set targets for the rate of fatalities and serious injuries per 100 million VMT. As regional VMT data for years 2019 through 2021 are not yet available, MTC replicated the methodology used by Caltrans to estimate future regional VMT. It was assumed that the annual growth in regional VMT between 2017 and 2018 (+1.4%) would continue into 2019. For years 2020 and 2021, VMT was assumed to remain constant at the estimated 2019 levels due to the suppression of transportation demand due to Shelter-in-Place orders and the lasting impacts of the present economic recession.

Figure 1: MTC Observed and Estimated Vehicle Miles Traveled for Target-Setting



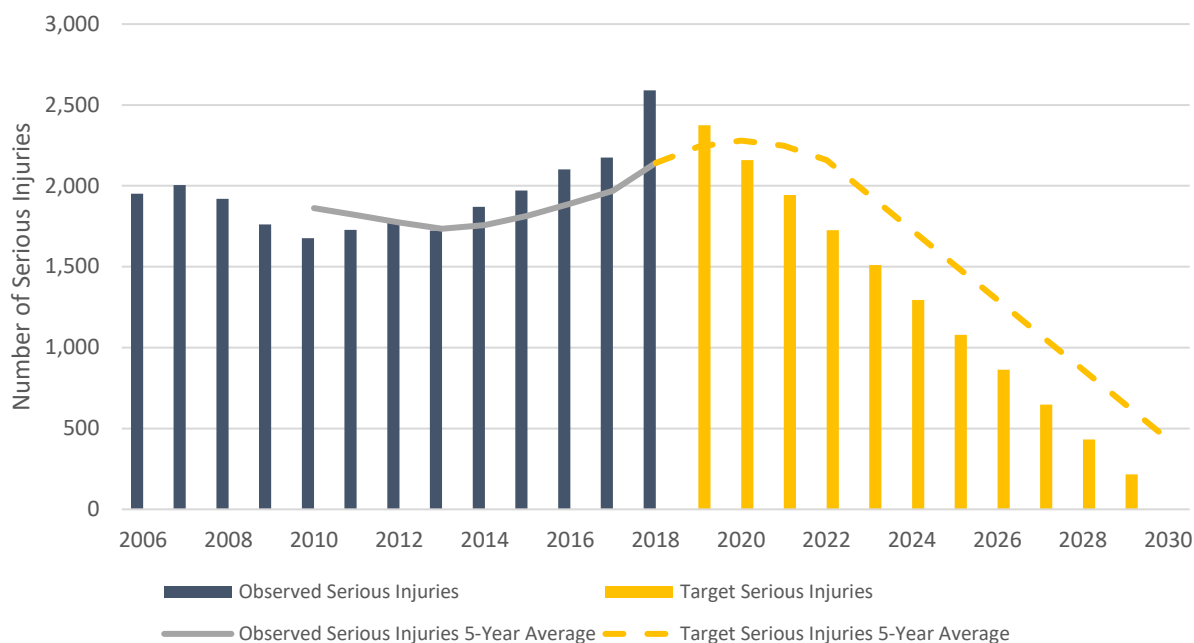
Figures 2 through 4 summarize the Bay Area's past performance and estimated future performance, upon which the targets are based, for number of fatalities, number of serious injuries, and number of non-motorized fatalities and serious injuries. The target number of fatalities or serious injuries is then divided by vehicle miles traveled (Figure 1) to calculate performance and targets for rate of fatalities and serious injuries per 100 million annual VMT.

Figure 2: MTC Regional Performance and Targets for Number of Fatalities



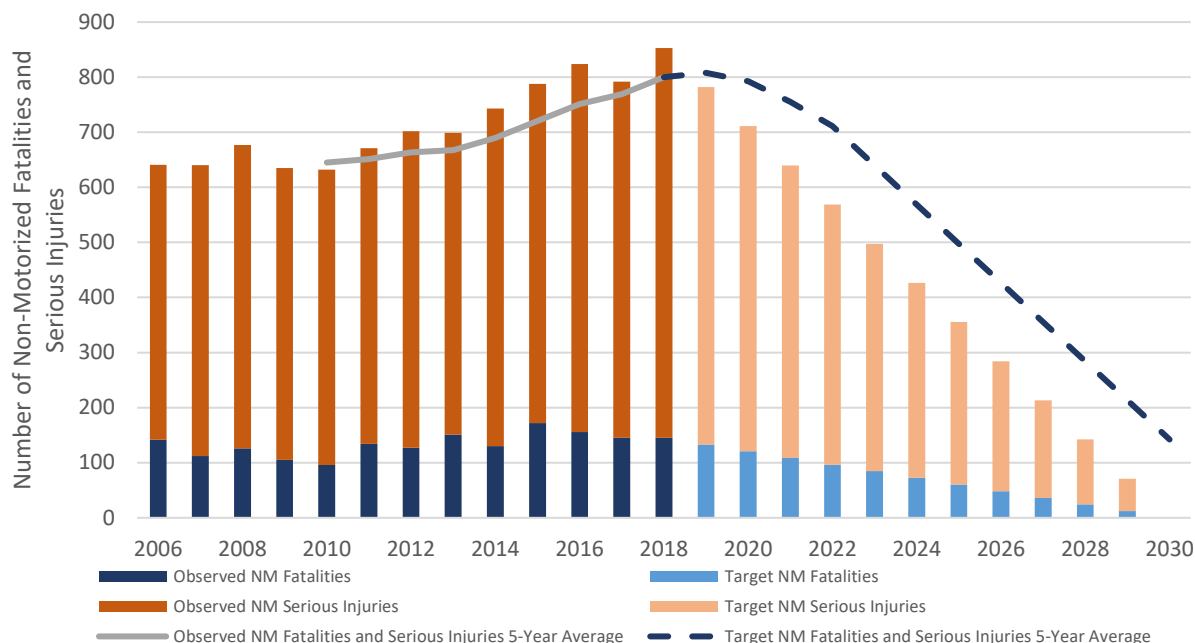
Road fatalities in the Bay Area have historically been linked with economic conditions – periods of economic growth lead to more VMT, which in turn leads to more fatalities if safety measures are not implemented. However, starting in 2016, the region began to break with that trend. While the region experienced sustained economic growth in the period between 2015 and 2018, road fatalities trended downward, perhaps signaling early benefits of an increased emphasis on road safety in jurisdictions throughout the Bay Area. That said, while the trend is optimistic, over 400 people lost their lives on the region’s roads in 2018. In order to arrive at zero fatalities by the year 2030, the region would need to eliminate 36 fatalities each year.

Figure 3: MTC Regional Performance and Targets for Number of Serious Injuries



While the number of fatalities has decreased in recent years in the region, the same cannot be said for the number of serious injuries. Like fatalities, the number of serious injuries increased as the region recovered from the Great Recession in the early 2010s. However, the number of serious injuries continued to climb between 2015 and 2018, reaching consecutive new highs every year since 2016 with over 2,500 serious injuries occurring on the region’s roads in 2018. The spike in serious injuries in 2018 can be attributed in part to a change in the way serious injuries are quantified. In mid-2017, the definition of serious injuries was amended to include suspected serious injuries, making 2018 the first full year of this expanded definition. In order to arrive at zero serious injuries by the year 2030, the region would need to eliminate 216 serious injuries each year.

Figure 4: MTC Regional Performance and Targets for Number of Non-Motorized Fatalities and Serious Injuries



Pedestrians, cyclists, and those using other non-auto personal mobility options such as scooters or skateboards, referred to as “non-motorized” travelers in the context of target-setting, face a higher risk of fatality or serious injury in the event of a collision. The number of non-motorized fatalities has followed a similar pattern to the overall number of fatalities, decreasing slightly between 2015 and 2018, even as cycling and walking commute mode shares continue to inch up slowly. Meanwhile, the number of non-motorized serious injuries has also matched the trend for the number of serious injuries, increasing in recent years to a new regional high in 2018. In order to arrive at zero non-motorized fatalities and serious injuries by the year 2030, the region would need to eliminate 12 non-motorized fatalities and 59 non-motorized serious injuries each year.

Summary of Proposed Targets

As presented in detail in **Attachment C**, staff propose the following targets for Road Safety for the 5-year performance period ending in 2021. The regional targets for this performance period are set based on a linear decrease in fatalities, serious injuries, and non-motorized fatalities and serious injuries to zero in the year 2030, in line with the Vision Zero framework.

Measure	Baseline*	2021 Target
Number of fatalities	445.2	392.6
Rate of fatalities per 100 million vehicle miles traveled	0.707	0.612
Number of serious injuries	2,141.6	2,248.0
Rate of serious injuries per 100 million vehicle miles traveled	3.399	3.499
Number of non-motorized fatalities and non-motorized serious injuries	800.0	755.5

* = based upon most recently available data (2018); uses five-year rolling average (2014-2018).

Proposed 2021 Targets for Roadway Safety

General Information

Goal	Road Safety
Performance Measure(s)	<ul style="list-style-type: none"> Number of fatalities Rate of fatalities per 100 million vehicle miles traveled Number of serious injuries Rate of serious injuries per 100 million vehicle miles traveled Number of non-motorized fatalities and non-motorized serious injuries
Target(s) for Year	2021
Target(s) Deadline for MTC Approval	February 26, 2021

Past Targets & Past Performance

Measure	Target (2014-2018)	Actual (2014-2018)	Target Achieved?	Measure ID
Number of fatalities	Support State targets	445.2	N/A	1
Rate of fatalities per 100 million vehicle miles traveled		0.707		2
Number of serious injuries		2,141.6		3
Rate of serious injuries per 100 million vehicle miles traveled		3.399		4
Number of non-motorized fatalities and non-motorized serious injuries		800.0		5

Current Conditions and Proposed Regional Targets

Measure	Baseline (2014- 2018)*	Target (2016- 2020)	Target (2017- 2021)	Measure ID
Number of fatalities	445.2	401.1	392.6	1
Rate of fatalities per 100 million vehicle miles traveled	0.707	0.630	0.612	2
Number of serious injuries	2,141.6	1,800.9	2,248.0	3
Rate of serious injuries per 100 million vehicle miles traveled	3.399	2.841	3.499	4
Number of non-motorized fatalities and non-motorized serious injuries	800.0	702.0	755.5	5

* = based upon most recently available data (2018); uses five-year rolling average (2014-2018)

Date: June 24, 2020
W.I.: 1233
Referred by: Planning

ABSTRACT
Resolution No. 4400

This resolution sets forth MTC's Regional Safety/Vision Zero Policy to support achievement of safety targets adopted by MTC.

Further discussion of these actions is contained in the MTC Executive Director's Memorandum to the Planning Committee dated June 12, 2020.

Date: June 24, 2020
W.I.: 1233
Referred by: Planning

Re: Regional Safety/Vision Zero Policy

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4400

WHEREAS, pursuant to Government Code § 66500 et seq., the Metropolitan Transportation Commission (“MTC”) is the regional transportation planning agency for the San Francisco Bay Area; and

WHEREAS, MTC is the designated Metropolitan Planning Organization (MPO) for the nine-county San Francisco Bay Area region, and safety has been a goal included in MTC’s Regional Transportation Plans for twenty years; and

WHEREAS the Moving Ahead for Progress in the 21st Century (MAP-21) Act and the Fixing America’s Surface Transportation (FAST) Act require metropolitan planning organizations to frequently set short range performance targets related to safety; and MTC has adopted aspirational regional safety targets as shown in Attachment A; and

WHEREAS, short-range federally-required targets will be incorporated into planning and programming processes in the coming years in compliance with the final Metropolitan Planning rule as adopted by the Federal Highway Administration and Federal Transit Administration on May 27, 2016;

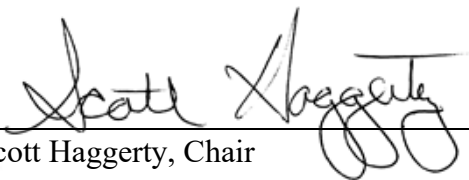
WHEREAS, 23 U.S. Code §450 requires the Regional Transportation plan to include a system performance report, including progress achieved by the MPO in meeting safety performance targets, and requires the Transportation Improvement Program (TIP), once implemented is designed to make progress toward achieving the safety performance target.

WHEREAS, “Vision Zero (VZ)” is defined as a strategy to eliminate traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all. Effective VZ strategies must be data-driven, and must consider equity and community concerns in all stages; and:

RESOLVED, that MTC hereby adopts a Regional Safety/VZ policy to support achievement of safety targets adopted by MTC, as stated in Attachment A; and:

RESOLVED, that MTC establishes “Proposed Principles and Actions for a Regional Vision Zero Policy” to guide staff in working towards supporting reduction of fatalities and serious injuries across the region, as detailed in Attachment A.

METROPOLITAN TRANSPORTATION COMMISSION



Scott Haggerty, Chair

The above resolution was approved by the Metropolitan Transportation Commission at a regular meeting of the Commission held in San Francisco, California, and at other remote locations, on June 24, 2020.

Date: June 24, 2020
W.I.: 1233
Referred by: Planning

Attachment A
Resolution No. 4400
Page 1 of 2

REGIONAL SAFETY/VISION ZERO POLICY STATEMENT:

Working together with our partner agencies, encourage and support equitable and data-driven actions towards eliminating traffic fatalities and serious injuries for the Bay Area region by 2030.

REGIONAL SAFETY TARGETS:

MTC's current safety targets for the region are based on a Toward Zero Deaths framework, basing targets on a linear reduction to zero fatalities and serious injuries in the region by the year 2030.

PROPOSED PRINCIPLES AND ACTIONS FOR A REGIONAL VISION ZERO POLICY:

Provide Regional Leadership to Promote Safety

1. MTC will engage and incentivize leadership across local jurisdictions in prioritizing safety and work towards aligning funding investments with safety goals.

Apply a Data Driven Approach

2. MTC's safety policies shall be driven and informed by data to allow available funds to be used strategically. Regional safety data will be used for safety target-setting, and monitoring of progress towards regional safety goals.
3. MTC will serve as a regional safety data bank so that cities - especially those with more limited resources - can benefit from an integrated safety data repository and a consistent and reliable source of safety data for traffic safety analysis, evaluation and applying for safety funding.

Promote Equity in Regional Safety Policies

4. MTC will advance equity through safety policies noting that communities of concern are the most at risk of suffering from traffic fatalities and serious injuries.
5. MTC will emphasize the importance of protecting all roadway users, including vulnerable users such as pedestrians, bicyclists, and users of new mobility.

Support Beneficial Safety Policies and Legislation

6. MTC will encourage safety policies and support safety legislation that targets evidence based solutions to safety problems.

Educate & Engage

7. Within budgetary constraints, MTC will conduct public outreach and provide technical assistance - reliable safety data, analytical toolkits, technical expertise - for local jurisdictions across the region, especially those that lack expertise or resources to implement a successful safety program.
8. MTC will engage key regional stakeholders in safety policy development and implementation, including local jurisdictions, counties, police departments, emergency response and others, to collaborate on safety best practices.