

Source: Pierre Gaunaurd/COG

TRANSIT AND ROADWAY SAFETY

TPB Performance Measures and Targets

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Transportation Planning Board
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Contents of Presentation

- TPB Goals
- Federal Requirements for the Performance Measures
- Target Development
  - Methodology / Metric / Measures
  - Past Performance and Key Takeaways
  - Draft Targets
- Next Steps

TPB Goals and Performance Measures

- TPB's Goals: **Safety**, Maintenance, Reliability, Affordable and Convenient Mobility Options, Efficient System Operations, Environmental Protection, Resilient Region, and Livable and Prosperous Communities
- Performance measures help assess progress for regional safety.



Source: BeyondDC/Flickr

Transit Safety

Transit Safety Federal Requirements

Performance Period: Annually

Target-Setting Requirements:

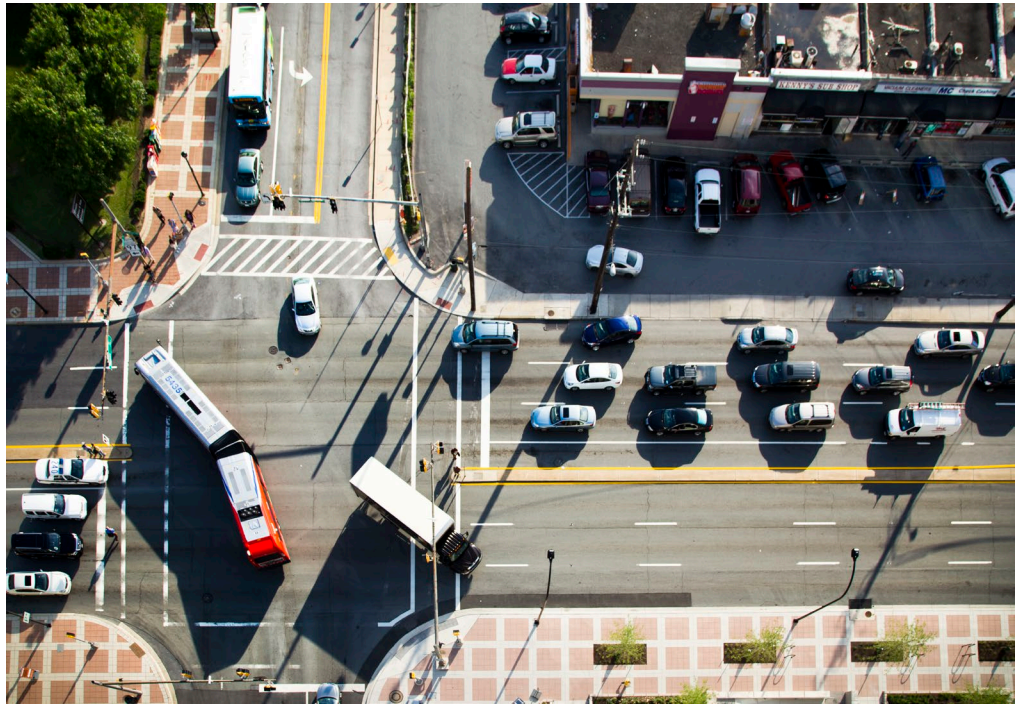
- Applicable transit providers must annually set targets for their system
- MPOs set regional targets for the metropolitan planning area when Plan or TIP is updated
    - TPB sets regional targets annually following state/agency adoption of its transit safety targets

Regional Target-Setting Approach:

- Establish a common quantifiable regional target for the different system in each transit category based on state/agency targets

Applicable Regional Transit Systems

- Transit safety requirements apply to providers of public transportation that are recipients and sub-recipients of federal Section 5307 funding:
  - **WMATA:** Metrorail, Metrobus, MetroAccess
  - **MDOT-MTA:** MTA Commuter Bus
  - **PRTC:** OmniRide and OmniRide Access/Connect
  - Local systems in Maryland:
    (*fixed-route and demand response*)
    - **VanGo** (Charles Co.)
    - **Transit** (Frederick Co.)
    - **Ride On** (Montgomery Co.)
    - **GoPGC** (Prince George's Co.)



Source: Bossi/Flickr

Transit Safety Target Measures

SAFETY EVENTS 1. Number 2. Rate	**FATALITIES** 7. Number 8. Rate 9. Rate, of transit workers
COLLISION RATES 3. All collisions 4. Collisions with pedestrians 5. Collisions with motor vehicles	**INJURIES** 10. Number 11. Rate 12. Rate, of transit workers
RELIABILITY 6. Mean Distance Between Failures (MDBF)	**ASSAULTS** 13. On transit workers, number 14. On transit workers, rate

Targets for each measure are set for the following transit modes:

1. Heavy Rail (HR)
2. Urban Bus (MB)
3. Commuter Bus (CB)
4. Demand Response (DR)
5. Vanpools (VP)

Transit Safety Target-Setting Methodology

- Targets for the region are based on those adopted or identified by each provider of public transportation.
- Measures are calculated for each mode:
  - Number of [Performance Measure] Incident Counts – total number for all providers of that mode
  - Rate of [Performance Measure] Incident Counts – total number of a measure's incidents for all providers of the mode divided by the total number of Vehicle Revenue Miles (VRM) for that mode, per 10M VRM
  - Mean Distance Between Failure (MDBF) – the total number of VRM for that mode divided by the total number of major mechanical failures for all providers of the mode

Major Safety Events

Target Met

Target Not Met

Mode	FY 2026 Approved				FY 2027 DRAFT	
	Number Target	Number Observed	Rate Target	Rate Observed	Number Target	Rate Target
Heavy Rail (HR)	124	749	10.60	72.20	**102**	**8.3**
Urban Bus (MB)	505	752	0.83	1.25	**411**	**67.08**
Commuter Bus (CB)	124	2	1.93	0.03	**88**	**134.93**
Demand Response (DR)	75	38	0.39	0.22	**61**	**32.19**
Vanpools (VP)	0	0	0.00	0.00	**0**	**0.00**

Transit Collisions

Target Met

Target Not Met

Mode	FY 2026 Approved						FY 2027 DRAFT		
	Rate Target	Rate Observed	Vehicular Collision Rate Target	Vehicular Collision Rate Observed	Pedestrian Collision Rate Target	Pedestrian Collision Rate Observed	Rate Target	Pedestrian Collision Rate Target	Vehicular Collision Rate Target
Heavy Rail (HR)	1.70	0.87	0.49	0.00	0.89	0.77	**1.75**	**1.4**	**0.00**
Urban Bus (MB)	0.58	0.37	0.63	0.29	0.03	0.05	**136.6**	**3.64**	**109.56**
Commuter Bus (CB)	1.37	0.02	1.37	0.02	0.00	0.00	**130.33**	**0.00**	**107.33**
Demand Response (DR)	0.37	0.16	0.33	0.13	0.03	0.00	**31.14**	**0.88**	**25.86**
Vanpools (VP)	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	**0.00**	**0.00**

Transit Reliability – Mean Distance Between Failure (MDBF)

Target Met

Target Not Met

Mode	FY 2025 Approved		FY 2027 DRAFT
	MDBF Target	MDBF Observed	MDBF Target
Heavy Rail (HR)	29,000	209,142	29,000
Urban Bus (MB)	8,964	7,006	8,835
Commuter Bus (CB)	25,000	16,501	17,267
Demand Response	24,913	47,572	26.325
Vanpools (VP)	0	0	0

Transit Fatalities

Target Met

Target Not Met

Mode	FY 2026 Approved						FY 2027 DRAFT		
	Number Target	Number Observed	Rate Target	Rate Observed	Transit Worker Rate Target	Transit Worker Rate Observed	Number Target	Rate Target	Transit Worker Rate Target
Heavy Rail (HR)	0	17	0.00	1.64	0.00	0.00	**0**	**0.00**	**0.00**
Urban Bus (MB)	1	4	0.00*	0.01	0.00	0.00	**0**	**0.00**	**0.00**
Commuter Bus (CB)	0	0	0.00	0.00	0.00	0.00	**0**	**0.00**	**0.00**
Demand Response	0	0	0.00	0.00	0.00	0.00	**0**	**0.00**	**0.00**
Vanpools (VP)	0	0	0.00	0.00	0.00	0.00	**0**	**0.00**	**0.00**

* The TPB Approved MB FY 2026 Fatality Rate was 0.01, however using a regional VRM denominator (such as for FY 2027 and other rates in FY 2026), the FY 2026 MB rate is 0.002 (or 0.00).

Transit Injuries

Target Met

Target Not Met

Mode	FY 2026 Approved						FY 2027 DRAFT		
	Number Target	Number Observed	Rate Target	Rate Observed	Transit Worker Rate Target	Transit Worker Rate Observed	Number Target	Rate Target	Transit Worker Rate Target
Heavy Rail (HR)	288	269	24.60	25.93	8.70	3.08	**313**	**25.4**	**7.4**
Urban Bus (MB)	409	476	0.67	0.79	0.17	0.10	**414**	**67.57**	**15.45**
Commuter Bus (CB)	0	18	0.00	0.29	0.00	0.02	**0**	**0**	**0**
Demand Response	42	31	0.22	0.18	0.08	0.04	**38**	**20.06**	**7.39**
Vanpools (VP)	0	0	0.00	0.00	0.00	0.00	**0**	**0**	**0**

Assaults on Transit Workers

Target Met

Target Not Met

Mode	FY 2026 Approved				FY 2027 DRAFT	
	Number Target	Number Observed	Rate Target	Rate Observed	Number Target	Rate Target
Heavy Rail (HR)	545	439	46.50	42.32	**532**	**43.2**
Urban Bus (MB)	233	276	0.38	0.46	**267**	**43.58**
Commuter Bus (CB)	0	0	0.00	0.00	**0**	**0**
Demand Response	3	0	0.02	0.00	**1**	**0.53**
Vanpools (VP)	0	0	0.00	0.00	**0**	**0**

DRAFT FY 2027 Transit Safety Targets

	Fatalities			Injuries			Safety Events		Assaults on Transit Workers		Collisions			Reliability
	Number	Rate	Transit Worker Rate	Number	Rate	Transit Worker Rate	Number	Rate	Number	Rate	Rate	Pedestrian Collision Rate	Vehicular Collision Rate	MDBF
Heavy Rail (HR)	0	0	0	313	25.40	7.40	102	8.30	532	43.2	1.75	1.40	0.00	29,000
Urban Bus (MB)	0	0	0	414	67.57	15.45	411	67.08	267	43.58	136.60	3.64	109.56	8,835
Commuter Bus (CB)	0	0	0	0	0.00	0.00	88	134.93	0	0.00	130.33	0.00	107.33	17,267
Demand Response (DR)	0	0	0	38	20.06	7.39	61	32.19	1	0.53	31.14	0.88	25.86	26,325
Vanpools (VP)	0	0	0	0	0.00	0.00	0	0.00	0	0.00	0.00	0.00	0.00	0

NOTE: **Red** = negative changes from the prior year's targets

Rates are calculated per 10M Vehicle Revenue Miles (VRM)
VRM Denominator = total VRM for agencies with data (exclude those missing numbers or with n/a)

Roadway Safety

Roadway Safety Federal Requirements

Performance Period: Annually

Target-Setting Requirements:

- State DOTs must report their targets *annually* through their Highway Safety Improvement Program (HSIP) report
- MPOs establish 5-year rolling average targets within 180 days after State DOT targets are established

Target-Setting Approach:

- Establish quantifiable regional targets for the TPB metropolitan planning area based on State DOT targets



Source: Elvert Barnes/Flickr

Performance Measures – Roadway Safety

Performance Measure	Description
Number of Fatalities	Total number of fatalities during a calendar year
Rate of Fatalities per 100 million VMT	Ratio of total fatalities to VMT
Number of Serious Injuries	Total number of serious injuries during a calendar year
Rate of Serious Injuries per 100 million VMT	Ratio of total serious injuries to VMT
Number of Nonmotorized Fatalities and Serious Injuries	Total number of fatalities and serious injuries during a calendar year

NOTE: Each performance measures is for a five-year rolling average

Roadway Safety Target-Setting Methodology

- TPB targets for each performance measure is a composite of sub-targets developed for each State
- Combine the three sub-targets into a regional target for the region (raw target)
- Past TPB Directive: If a calculated target is higher than the previous target, set the target equal to the previous target, i.e., target is "capped"

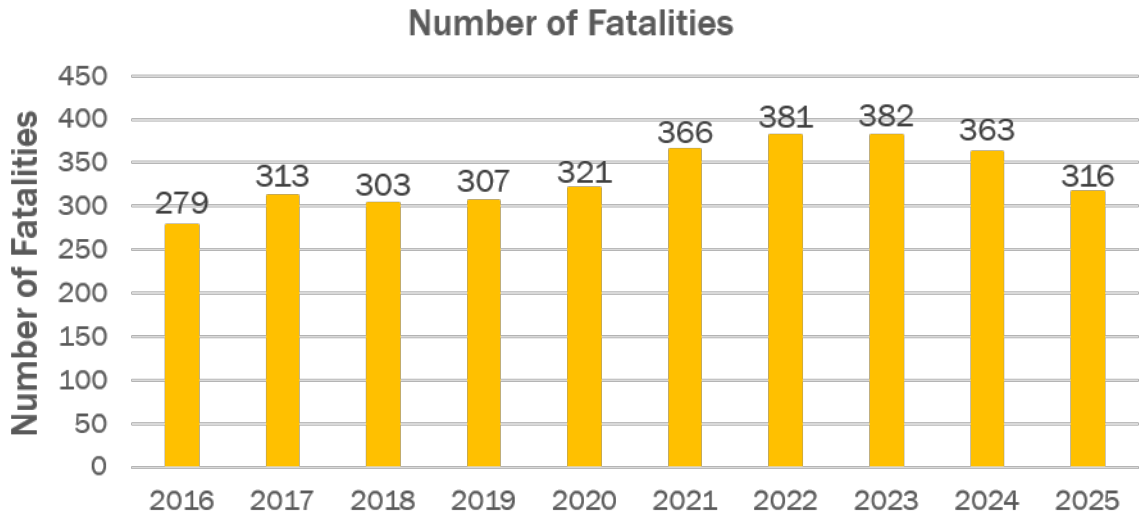


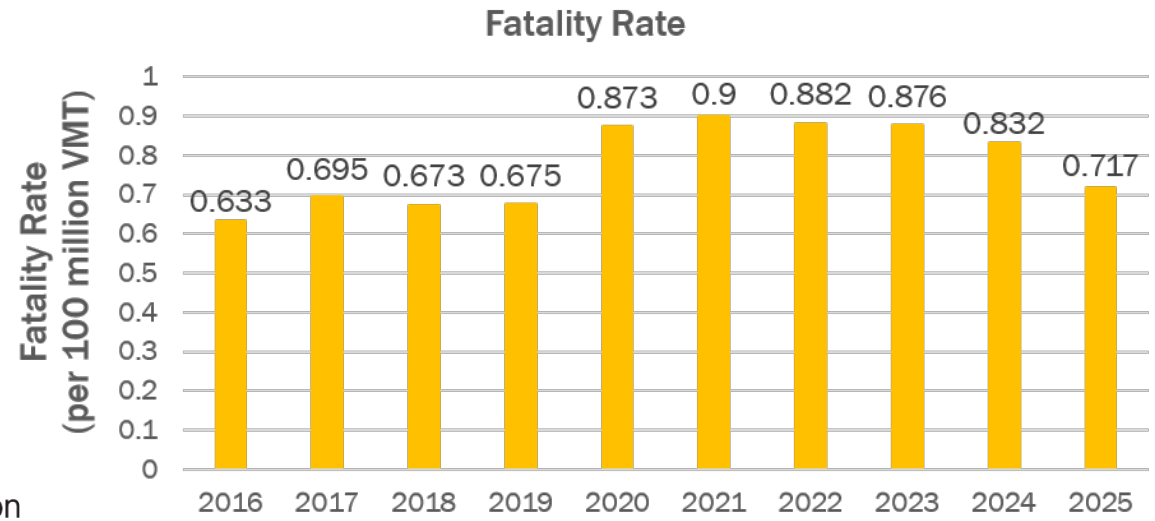
Source: Dan Reed/Flickr

Roadway Fatalities - Observed Data

Desired Trend

Expected Trend



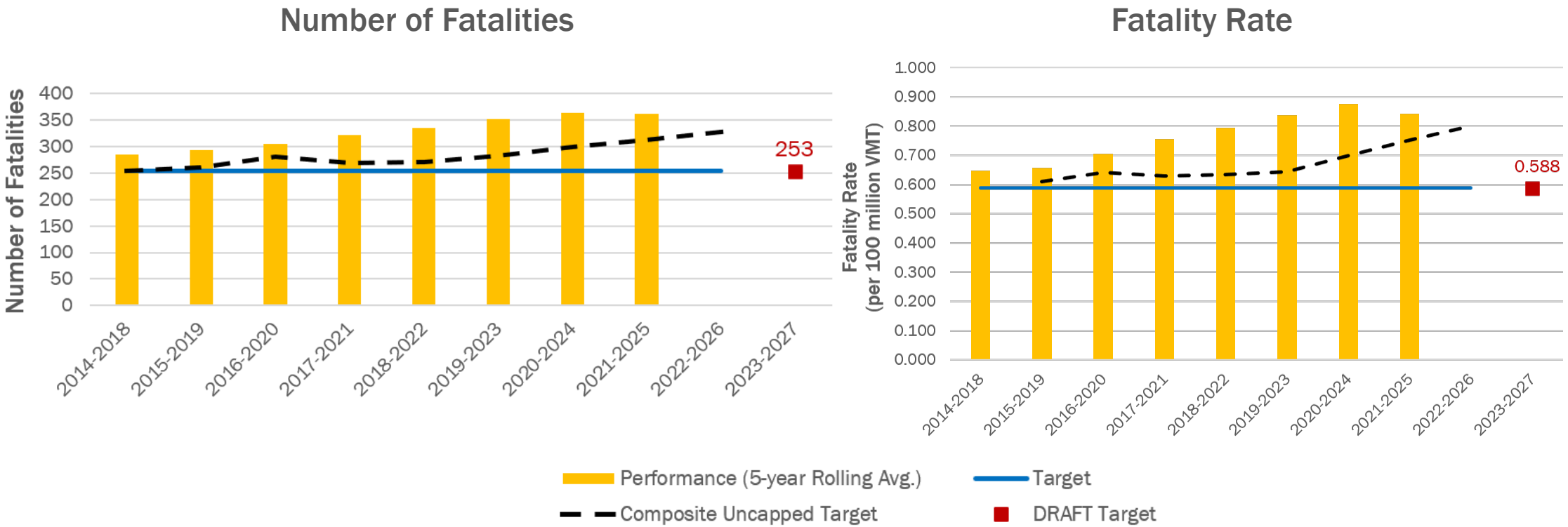


NOTE:
Figures listed for 2025 are from preliminary state fatality data; 2025 FARS data not yet published.

Roadway Fatalities - Five-Year Rolling Average

Desired Trend

Expected Trend



NOTE:
Figures listed for 2025 are from preliminary state fatality data; 2025 FARS data not yet published.

Roadway Fatalities - Draft Targets and Context



DRAFT Number of Fatalities Target (2027): **253**
DRAFT Fatality Rate Target (2027): **0.588**

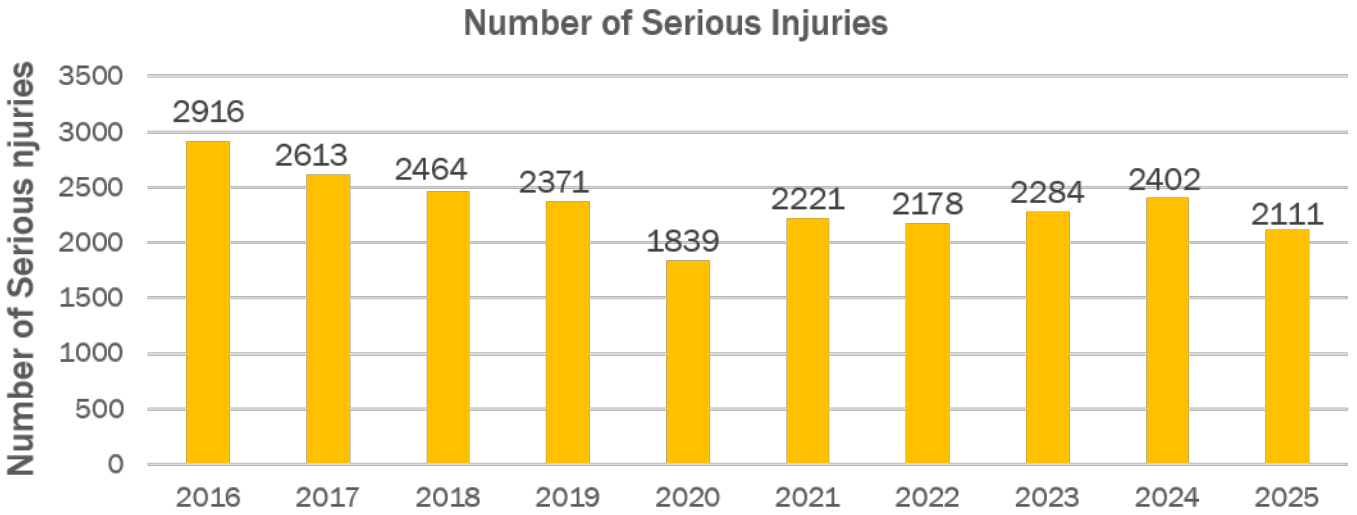
Context:

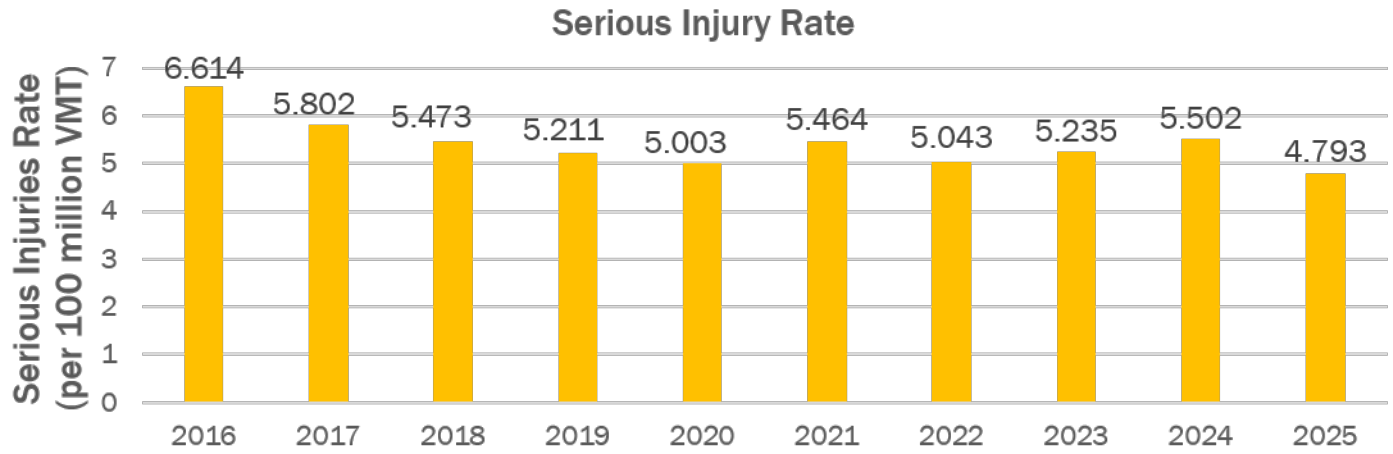
- In 2025, traffic fatalities decreased 13% from 2024.
- Since 2023, there has been a 17% decrease in traffic fatalities.
- The fatality rate continued to decline for the fourth straight year.

Roadway Serious Injuries - Observed Data

Desired Trend

Expected Trend



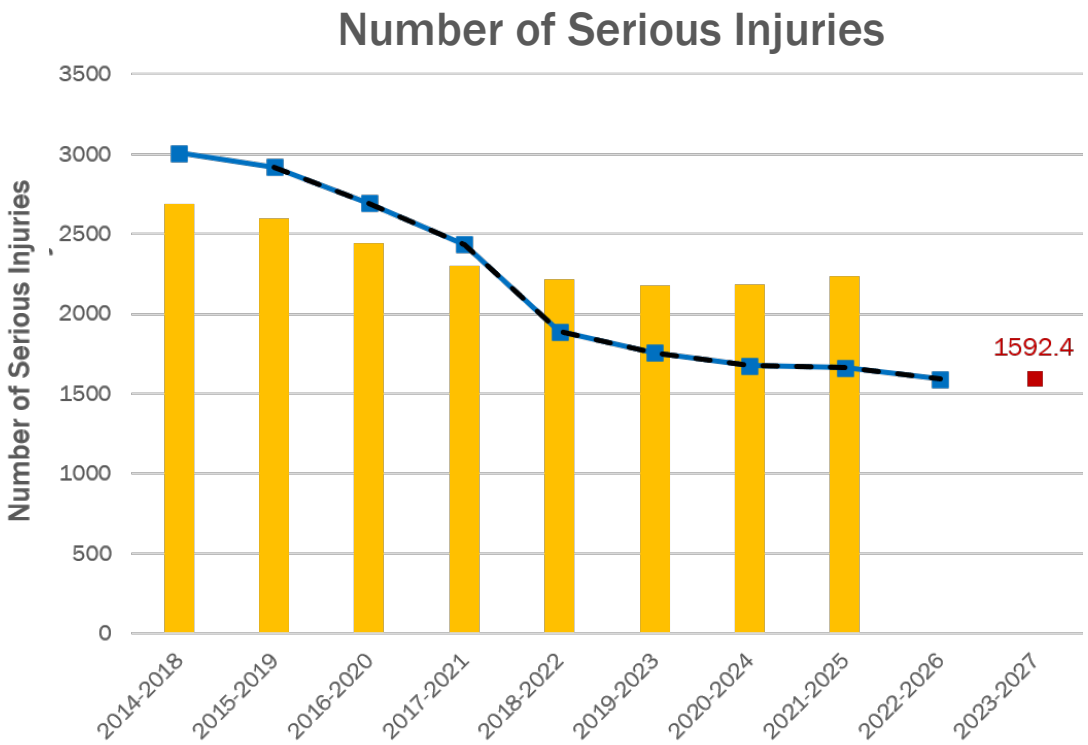


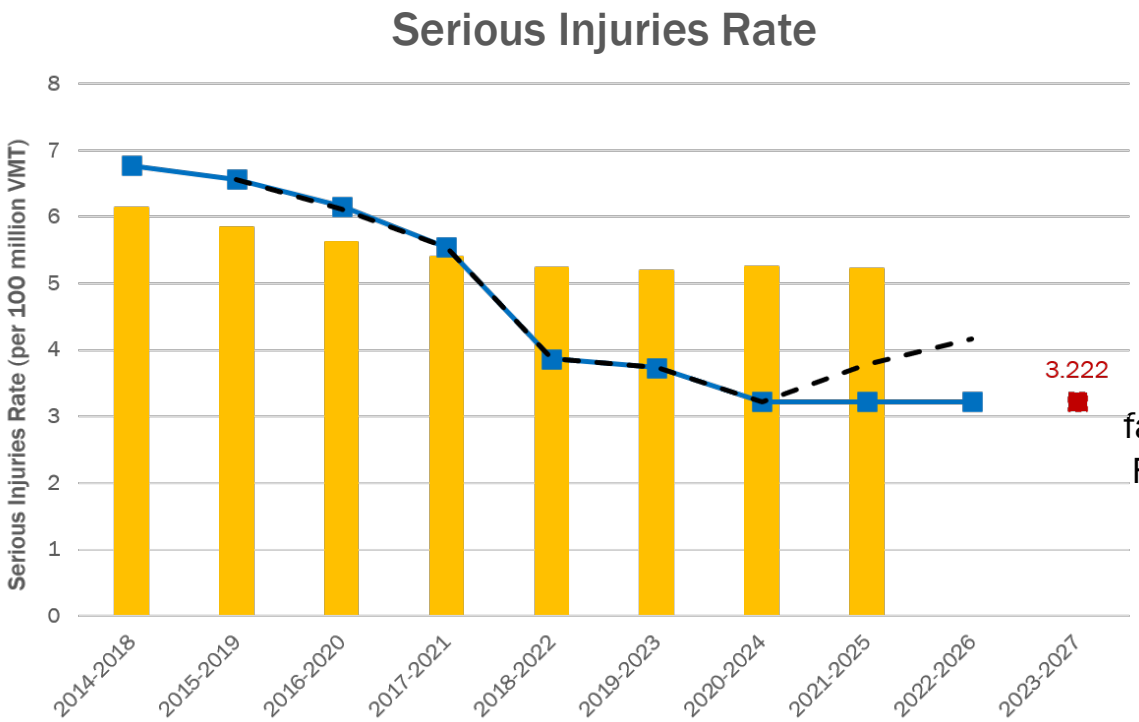
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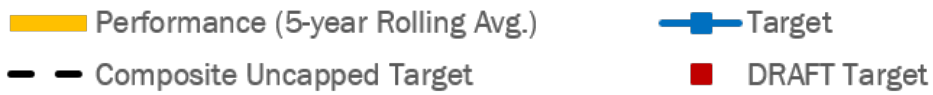
Roadway Serious Injuries – Five-Year Rolling Average

Desired Trend

Expected Trend







NOTE: Figures listed for 2025 are from preliminary state fatality data; 2025 FARS data not yet published.

Roadway Serious Injuries – Draft Targets and Context



DRAFT Number of Serious Injuries Target (2027): **1592.4**
DRAFT Serious Injuries Rate Target (2027): **3.222**

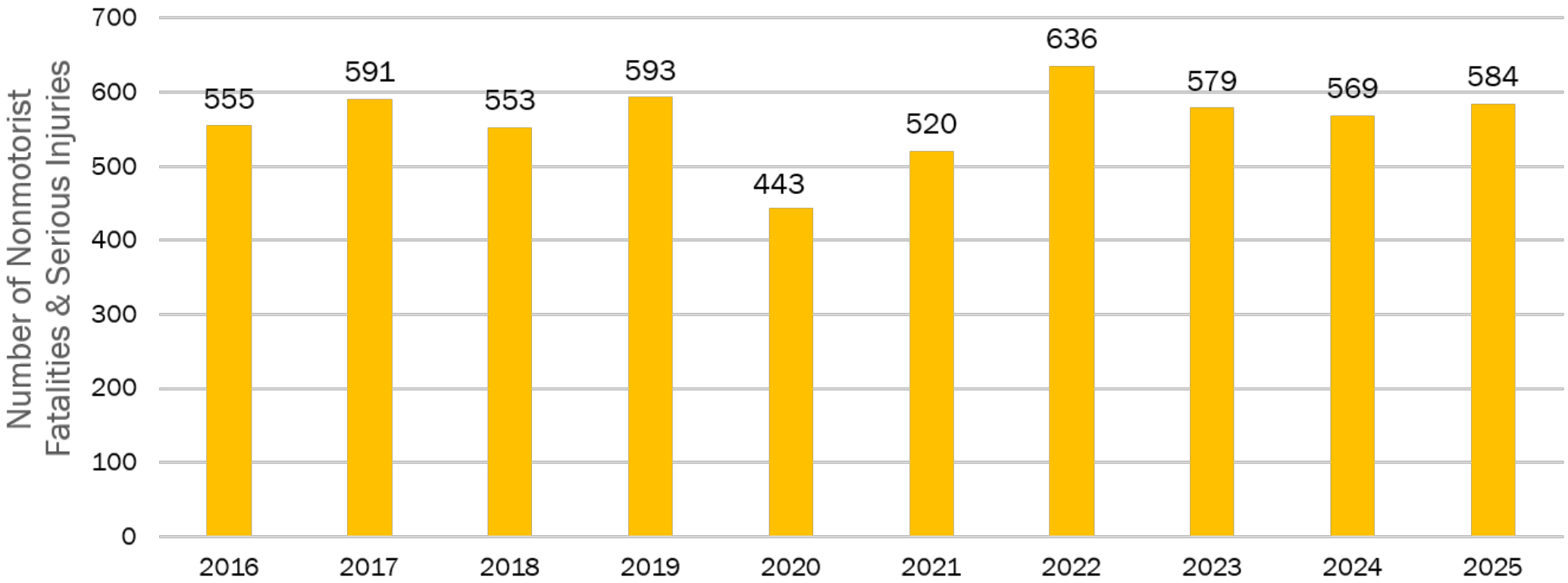
Context:

- In the past five years, serious injuries have generally been lower than pre-pandemic levels.
- Between 2024-2025, serious injuries have gone down 12%.
- The targets have consistently been not met, as serious injuries continue to be higher than annual targets.

Roadway Nonmotorist Fatalities & Serious Injuries - Observed Data

Desired Trend

Expected Trend

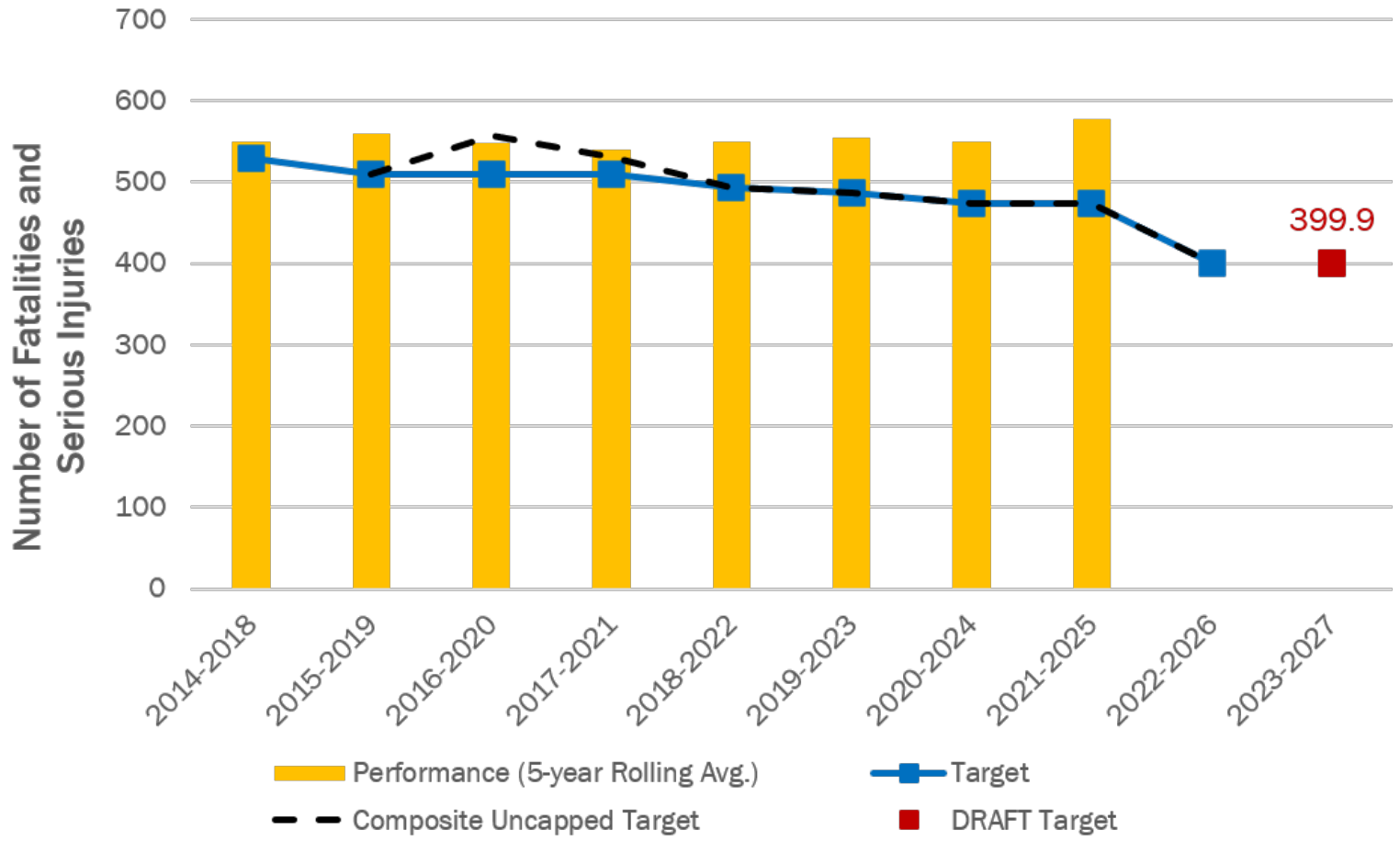


NOTE:
Figures listed for 2025 are from preliminary state fatality data; 2025 FARS data not yet published.

Roadway Nonmotorist Fatalities & Serious Injuries – Five-Year Rolling Average

Desired Trend

Expected Trend



NOTE:
Figures listed for 2025 are from preliminary state fatality data; 2025 FARS data not yet published.

Nonmotorist Fatalities and Serious Injuries Draft Targets and Context



DRAFT Number of Nonmotorist Fatalities & Serious Injuries Target (2027): **399.9**

Context:

- Pre-pandemic (2016-2019) saw variability within a stable range, but not meeting targets.
- First COVID year (2020) had a record low but then saw a record high in 2022.
- Post-COVID years (2023-2025) were comparable to pre-pandemic levels.
- Target has consistently not been met, aside from the 2020 target.
- Nonmotorist fatalities and serious injuries increased by 2.6% from 2024-2025, breaking a two-year consecutive decline (2023-2024).

2021-2025 Performance vs. Targets Summary

Performance Measure *(5-Year Rolling Average)*	2021-2025 Projections	2021-2025 Target	2021-2025 Actual Performance	Status
Number of Fatalities	312.2	253	361.6	Not Met
Rate of Fatalities per 100 million VMT	0.751	0.588	0.840	Not Met
Number of Serious Injuries	1,661.9	1661.9	2239.20	Not Met
Rate of Serious Injuries per 100 million VMT	3,773	3.222	5.207	Not Met
Number of Nonmotorized Fatalities and Serious Injuries	474.1	473.5	577.60	Not Met

DRAFT FY 2027 Roadway Safety Targets

Performance Measure *(5-Year Rolling Average)*	2022-2026 Target	UNCAPPED 2023-2027 Targets	DRAFT 2023-2027 Target*
Number of Fatalities	253	338.5	**253**
Rate of Fatalities per 100 million VMT	0.588	0.793	**0.588**
Number of Serious Injuries	1592.4	1,949.1	**1,592.4**
Rate of Serious Injuries per 100 million VMT	3.222	4.617	**3.222**
Number of Nonmotorized Fatalities and Serious Injuries	399.9	512.7	**399.9**

* Capped to match previous adopted target

Next Steps

- **November**
  - TPB staff collect feedback and comments

- **December**
  - 12/4 TPB Staff present final targets to Technical Committee
  - 12/16 TPB Staff present final targets to the TPB

    > TPB approves new targets

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Appendix

Performance Measures - Transit System

Performance Measure	Description
Major Safety Events	Total number of all safety and security major events (collisions, derailments, fires, or life safety evacuations)
Major Safety Event Rate	Rate of all safety and security major events per total vehicle revenue miles
Collision Rate	Total number of all reportable collisions, per total vehicle revenue miles
Pedestrian Collision Rate	Rate of all collisions "with a person," per total vehicle revenue miles
Vehicular Collision Rate	Rate of all collisions "with a motor vehicle," per total vehicle revenue miles
System Reliability	Mean distance between major mechanical failures

Performance Measures - Transit Fatalities and Injuries

Performance Measure	Description
Fatalities	Total number of reportable fatalities
Fatality Rate	Rate of reportable fatalities per total vehicle revenue miles
Injuries	Total number of reportable injuries
Injury Rate	Rate of reportable injuries per total vehicle revenue miles
Transit Worker Fatality Rate	Rate of transit worker reportable fatalities for “Transit Employee/Contractor,” “Transit Vehicle Operator,” and “Other Transit Staff,” per total vehicle revenue miles
Transit Worker Injury Rate	Rate of transit worker reportable injuries for “Transit Employee/Contractor,” “Transit Vehicle Operator,” and “Other Transit Staff,” per total vehicle revenue miles
Assaults on Transit Workers	Number of all assaults on transit workers
Rate of Assaults on Transit Workers	Rate of all assaults on transit workers, per total vehicle revenue miles