



TRANSIT AND ROADWAY SAFETY

TPB Performance Measures and Targets

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TPB Technical Committee
November 6, 2026



National Capital Region
Transportation Planning Board

Agenda Item #5

Contents of Presentation

- TPB Goals
- Federal Requirements for the Performance Measures
- Target Development
 - Methodology
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- 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 fourteen transit safety performance measures
- MPOs set annual regional targets for the metropolitan planning area following state/agency adoption of its transit safety targets

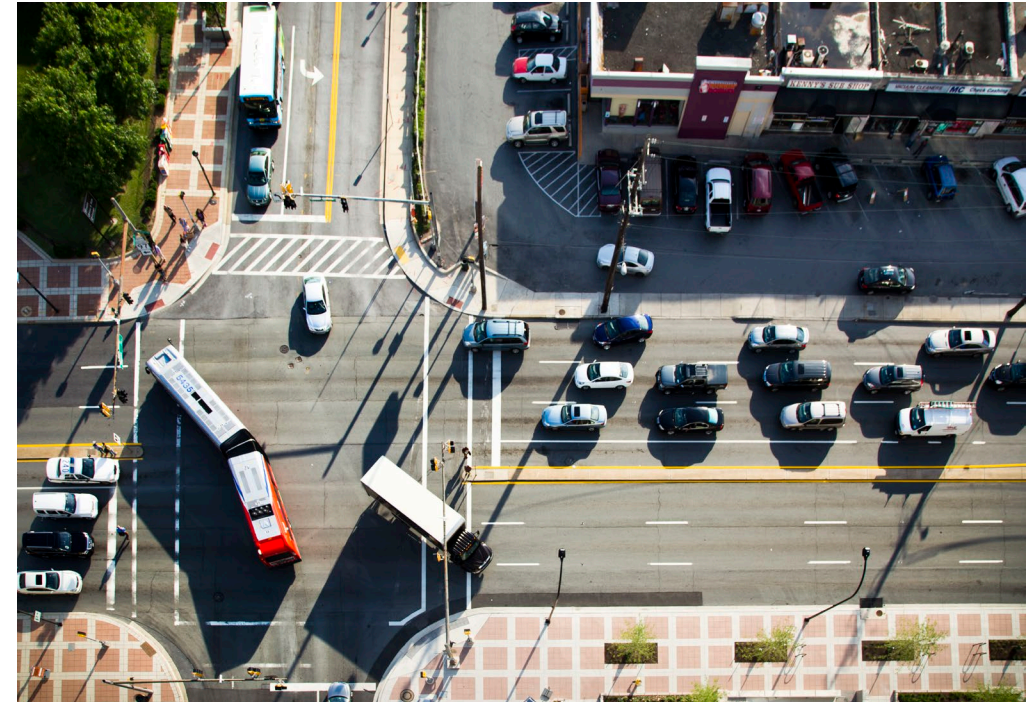
Target-Setting Approach:

- Establish quantifiable regional targets for the TPB metropolitan planning area based on state/agency targets



Applicable Regional Agencies

- 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 (fixed-route and demand response) in Maryland:
 - **VanGo** (Charles Co.)
 - **Transit** (Frederick Co.)
 - **Ride On** (Montgomery Co.)
 - **The Bus** (Prince George's Co.)



Source: Bossi/Flickr



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



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



Major Safety Events

 Target Met

 Target Not Met

Mode	FY 2026 Approved				FY 2027 DRAFT	
	Number Target	Rate Target	Number Observed	Rate Observed	Number Target	Rate Target
Heavy Rail (HR)	124 	10.60 	749	72.20	102	8.3
Urban Bus (MB)	505 	0.83 	752	1.25	427	72.89
Commuter Bus (CB)	124 	1.93 	2	3.18	124	160.72
Demand Response	75 	0.39 	38	21.82	97	53.52
Vanpools (VP)	0 	0.00 	0	0.00	0	0.00



Transit Collisions

 Target Met
 Target Not Met

Mode	FY 2026 Approved						FY 2027 DRAFT		
	Rate Target	Pedestrian Collision Rate Target	Vehicular Collision Rate Target	Rate Observed	Pedestrian Collision Rate Observed	Vehicular Collision Rate Observed	Rate Target	Pedestrian Collision Rate Target	Vehicular Collision Rate Target
Heavy Rail (HR)	1.70 	0.89 	0.49 	0.87	0.77	0.00	1.75	1.4	0.00
Urban Bus (MB)	0.58 	0.03 	0.63 	0.37	0.05	0.29	143.39	0.00	77.84
Commuter Bus (CB)	1.37 	0.00 	1.37 	0.02	0.00	0.02	389	0.00	320
Demand Response	0.37 	0.03 	0.33 	0.16	0.00	0.13	331.04	0.00	231.72
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	8,475
Commuter Bus (CB)	25,000 	16,501	36,019
Demand Response	24,913 	47,572	13,594
Vanpools (VP)	0 	0	0



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



Transit Fatalities

 Target Met

 Target Not Met

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



Transit Injuries

 Target Met

 Target Not Met

Mode	FY 2026 Approved						FY 2027 DRAFT		
	Number Target	Rate Target	Transit Worker Rate Target	Number Observed	Rate Observed	Transit Worker Rate Observed	Number Target	Rate Target	Transit Worker Rate Target
Heavy Rail (HR)	288 	24.60 	8.70 	269	25.93	3.08	313	25.4	7.4
Urban Bus (MB)	409 	0.67 	0.17 	476	0.79	0.10	417	71.18	5.63
Commuter Bus (CB)	0 	0.00 	0.00 	18	0.29	0.02	0	0	0
Demand Response	42 	0.22 	0.08 	31	0.18	0.04	114	62.9	12.69
Vanpools (VP)	0 	0.00 	0.00 	0	0.00	0.00	0	0	0



Assaults on Transit Workers

Mode	FY 2026 Approved				FY 2027 DRAFT	
	Number Target	Rate Target	Number Observed	Rate Observed	Number Target	Rate Target
Heavy Rail (HR)	545 	46.50 	439	42.32	532	43.2
Urban Bus (MB)	233 	0.38 	276	0.46	260	44.38
Commuter Bus (CB)	0 	0.00 	0	0.00	0	0
Demand Response	3 	0.02 	0	0.00	13	7.17
Vanpools (VP)	0 	0.00 	0	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	25.4	7.4	102	8.3	532	43.2	1.75	1.4	0	29,000
Urban Bus (MB)	0	0	0	417	71.18	5.63	427	72.89	260	44.38	143.39	0	77.84	8,475
Commuter Bus (CB)	0	0	0	0	0	0	124	160.72	0	0	389	0	320	36,019
Demand Response (DR)	0	0	0	114	62.9	12.69	97	53.52	13	7.17	331.04	0	231.72	13,594
Vanpools (VP)	0	0	0	0	0	0	0	0	0	0	0	0	0	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

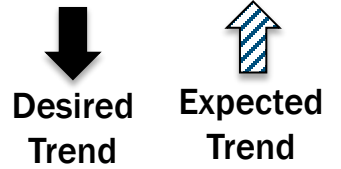
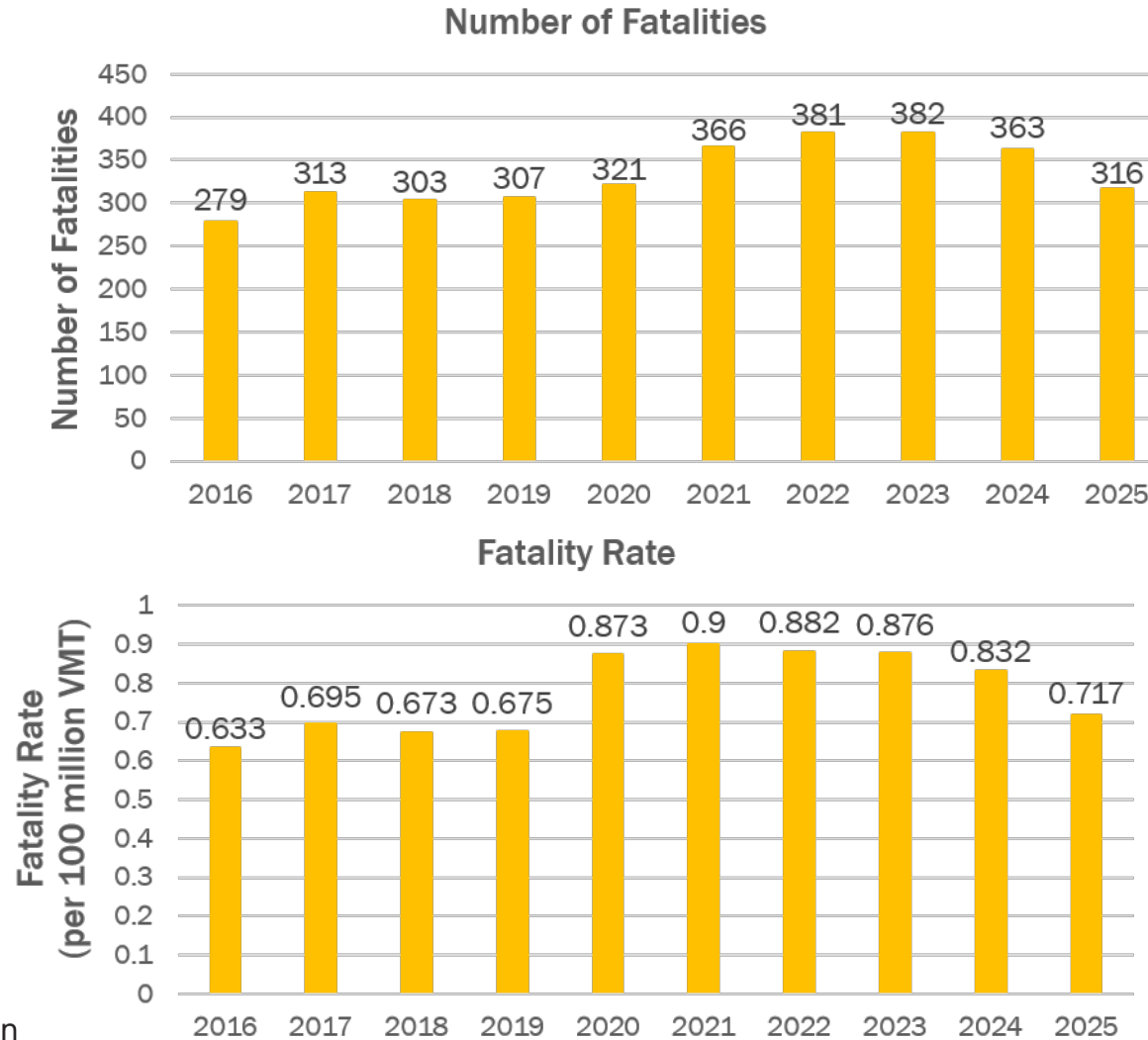
- TPB targets for each performance measure is a composite of sub-targets developed for each State
- Combine the three sub-targets into a regional target for the region (raw target)
- Past TPB Directive: If a calculated target is higher than the previous target, set the target equal to the previous target,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



Source: Dan Reed/Flickr



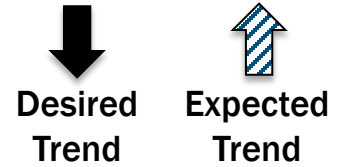
Roadway Fatalities - Observed Data



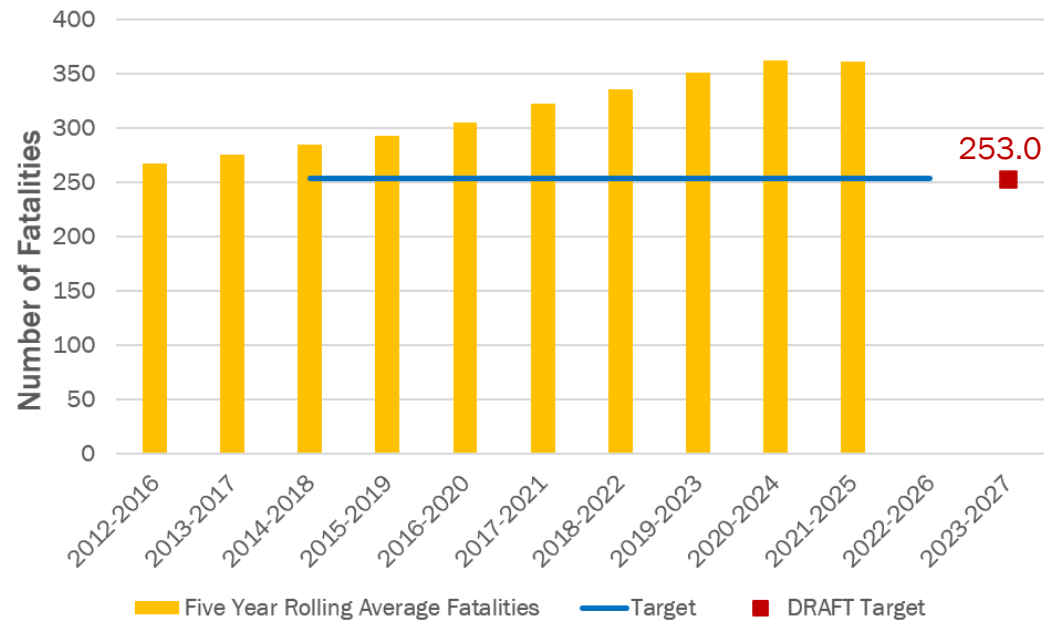
NOTE:
Figures listed for
2025 are from
preliminary state
fatality data; 2025
FARS data not yet
published.



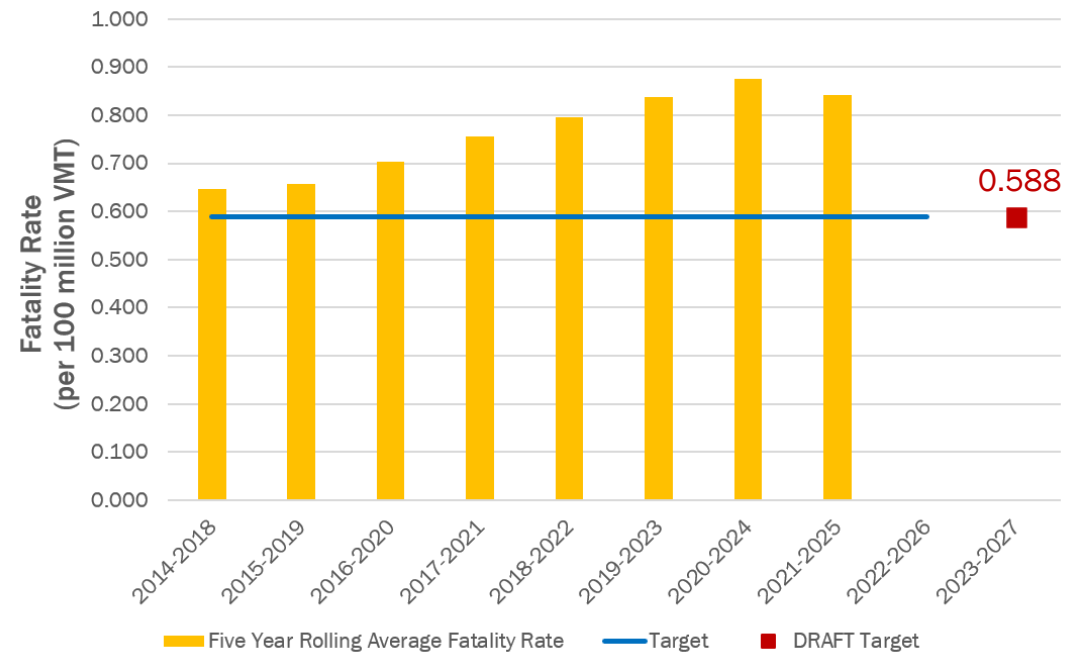
Roadway Fatalities - Five-Year Rolling Average



Number of Fatalities



Fatality Rate



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**

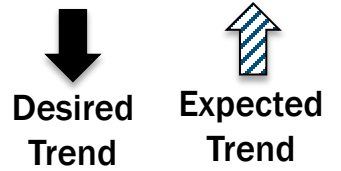
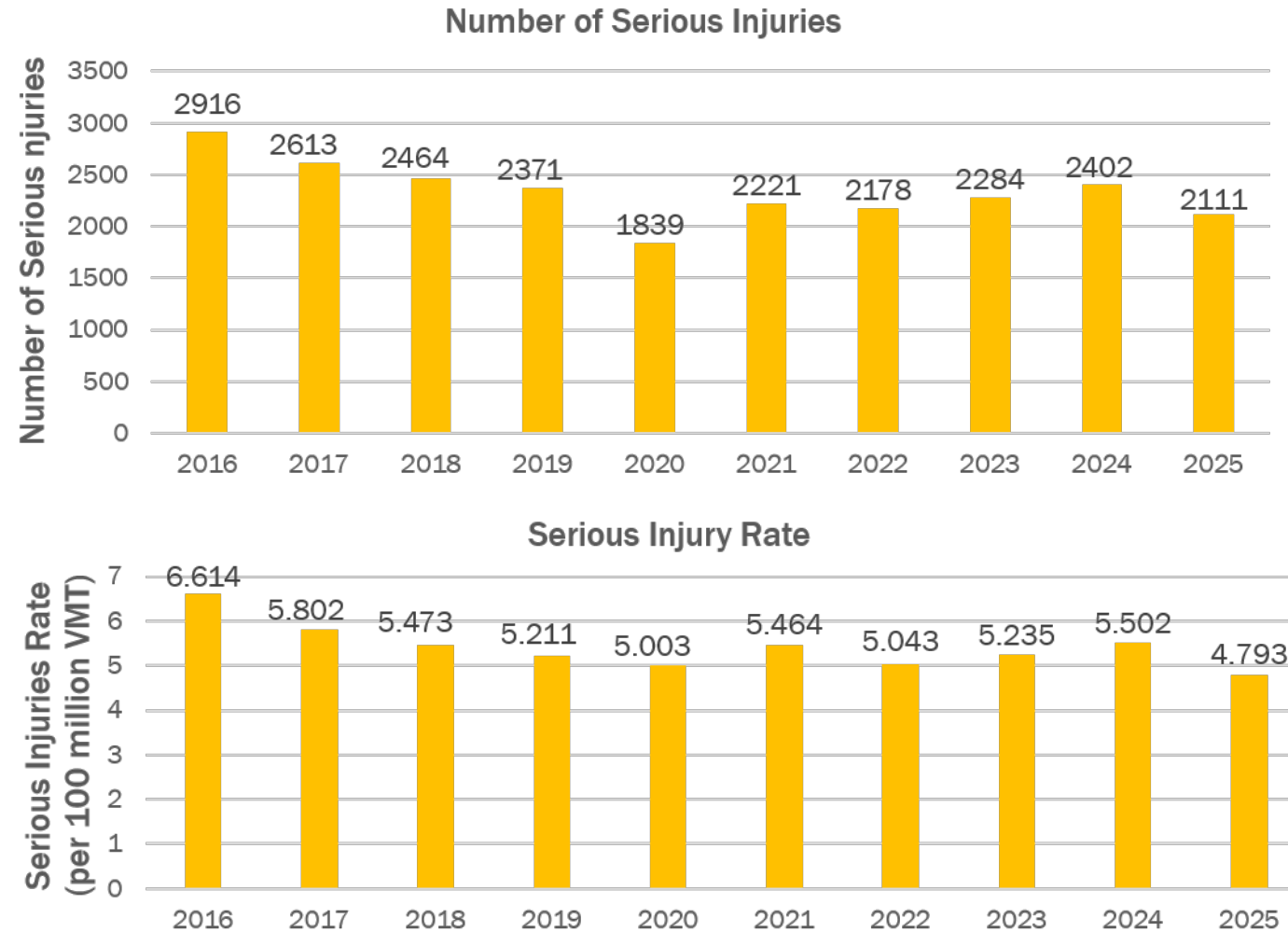
DRAFT Fatality Rate Target (2027): **0.588**

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.



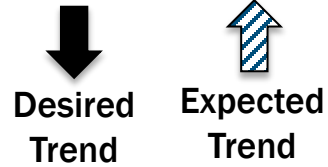
Roadway Serious Injuries - Observed Data



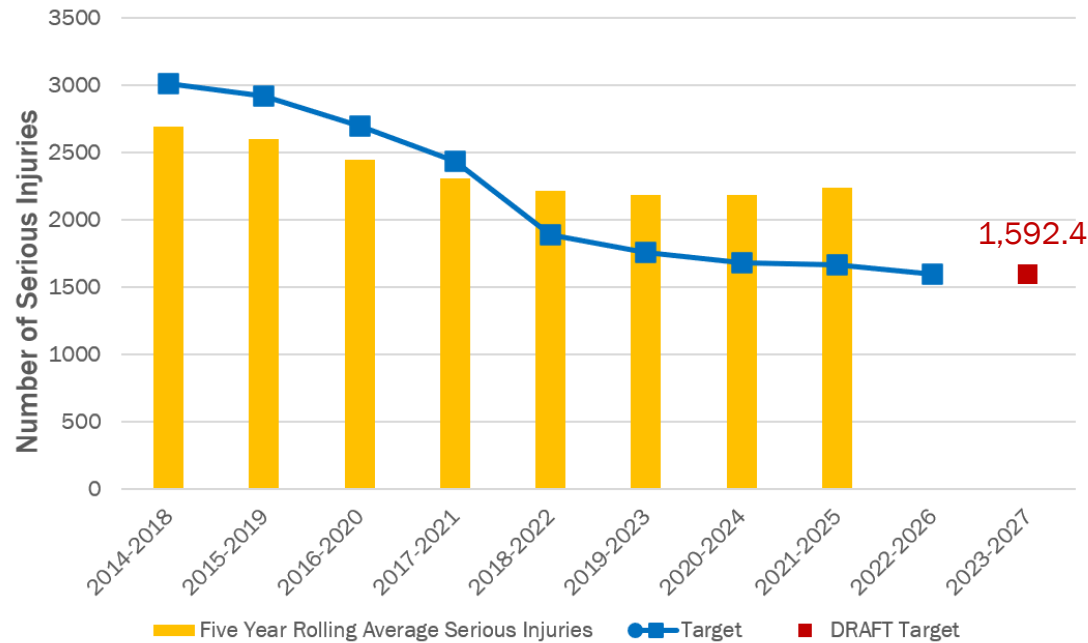
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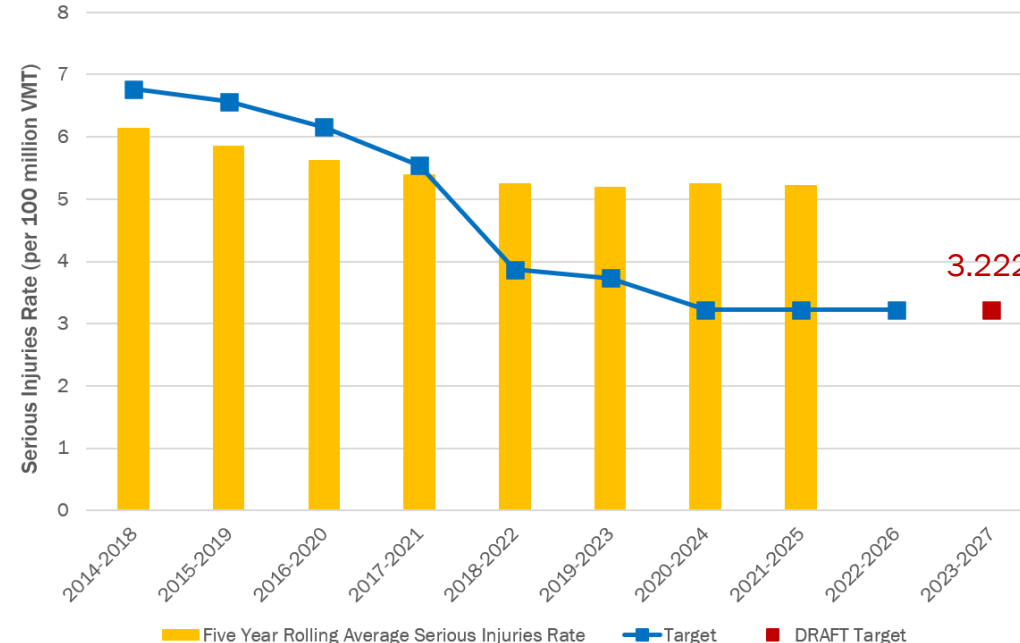
Roadway Serious Injuries – Five-Year Rolling Average



Number of Serious Injuries



Serious Injuries Rate



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**

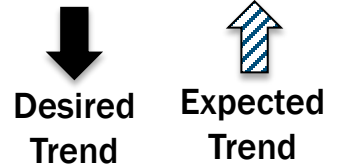
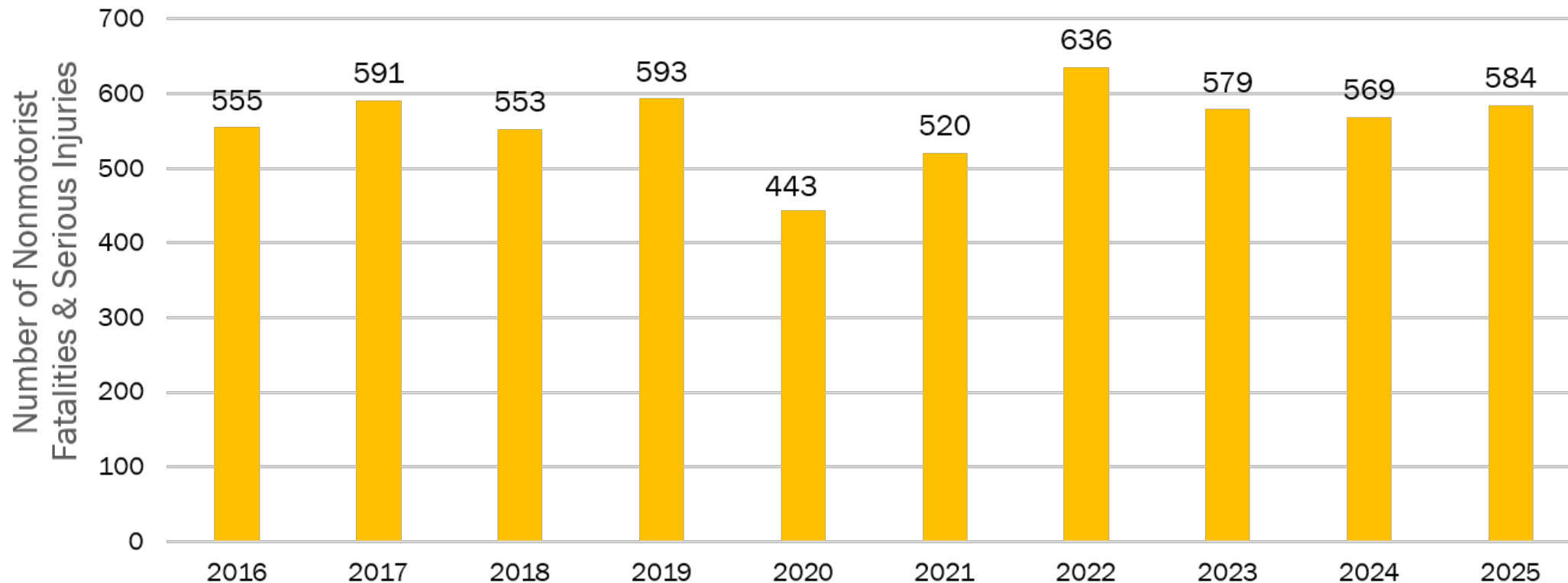
DRAFT Serious Injuries Rate Target (2027): **3.222**

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.



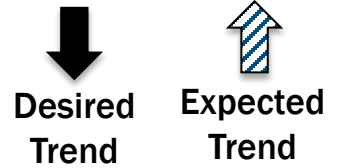
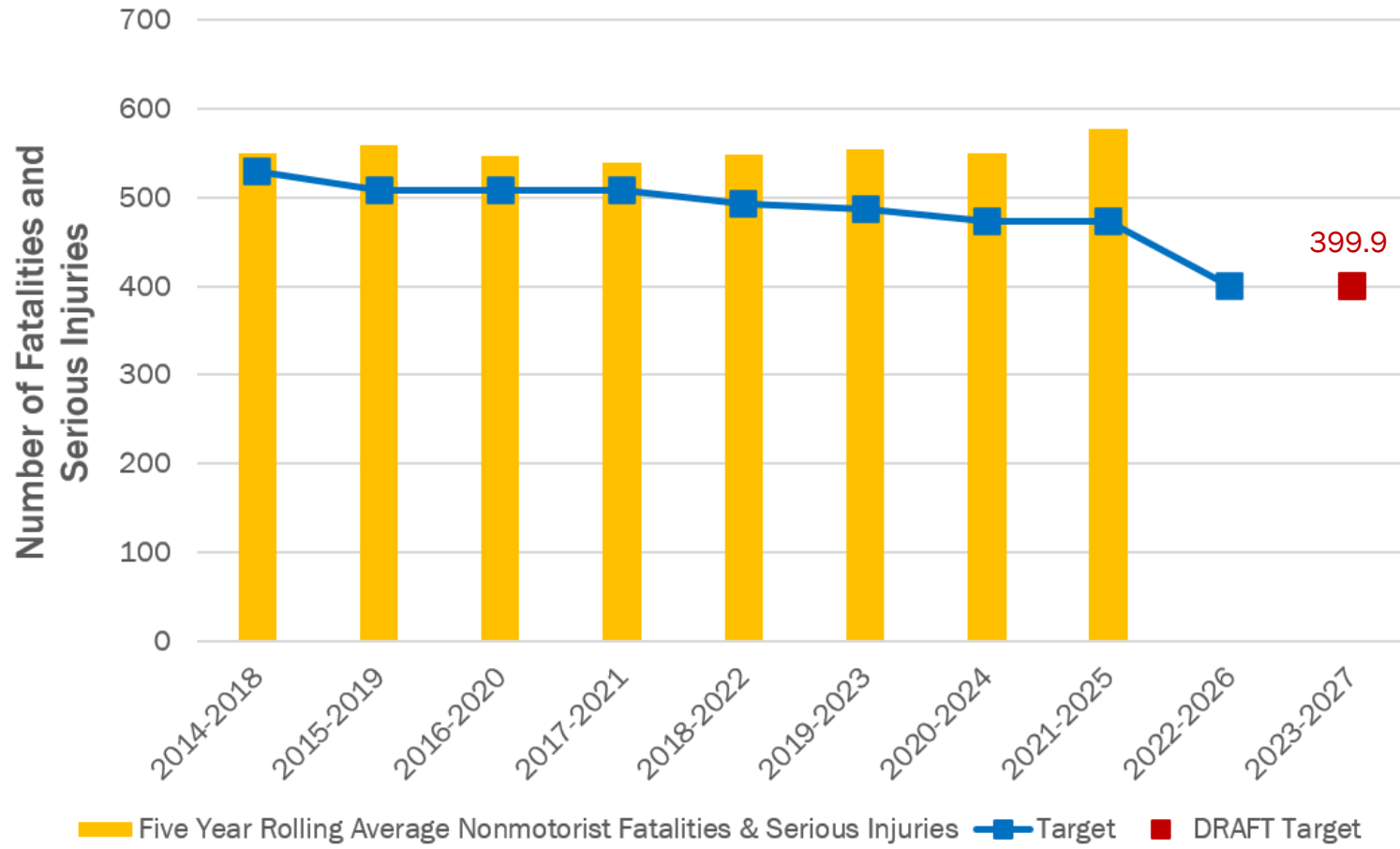
Roadway Nonmotorist Fatalities & Serious Injuries - Observed Data



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



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**
 - 11/18 TPB Staff present draft targets to the TPB
- **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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