

DRAFT ANNUAL REGIONAL TRANSIT AND HIGHWAY SAFETY TARGETS

Performance Based Planning and Programming (PBPP)

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National Capital Region
Transportation Planning Board

Presentation Items

- Part I: Transit Safety Process and Draft Targets
- Part II: Highway Safety Process and Draft Targets
- Part III: Next Steps

PBPP is a strategic data-driven approach that uses system information to make investment and policy decisions to achieve performance goals.

Two options for setting targets: adopting regional targets or supporting statewide targets

- *Due to the size and structure of the NCR, the TPB has consistently developed and adopted regional targets in coordination with DOTs and transit agencies*



Part I – Transit Safety Presentation Items

- Transit Agency Safety Requirements
- Transit Safety Performance Measures
- Applicability and Methodology
- Adopted 2022 Regional Targets
- 2022 Safety Performance
- Draft 2023 Regional Targets



Federal Requirements – Transit Agency Safety Plans

- Federal Performance Based Planning and Programming (PBPP) regulations require applicable providers of public transportation to develop and certify an agency safety plan
- Applicable transit providers are required to annually set targets for four (4) Transit Safety performance measures
- MPOs set annual regional targets for the metropolitan planning area following agency adoption of their Transit Safety targets



Transit Safety Performance Measures

	Performance Measures
Fatalities	Total number of reportable fatalities and the rate per total vehicle revenue miles by mode
Injuries	Total number of reportable injuries and the rate per total vehicle revenue miles by mode
Safety Events*	Total number of reportable events and the rate per total vehicle revenue miles by mode
System Reliability	Mean distance between major mechanical failures by mode

*Collisions, derailments, fires, or life safety evacuations



Applicable Regional Agencies & Methodology

- Transit safety requirements apply to providers of public transportation that are recipients and sub-recipients of federal Section 5307 funding:

WMATA: Metrorail, Metrobus, MetroAccess	VanGo (Charles Co.)
DDOT: DC Circulator, DC Streetcar	Transit (Frederick Co.)
MDOT-MTA: MTA Commuter Bus	Ride On (Montgomery Co.)
PRTC: OmniRide bus and paratransit	The Bus (Prince George's Co.)

- To determine regional targets and performance, the numbers for each provider are summed and numbers are calculated for the region as a whole



2022 Regional Transit Safety Targets

- Final targets for the region adopted by the TPB on December 21, 2022

	Fatalities		Injuries		Safety Events		Reliability
	Number	Rate	Number	Rate	Number	Rate	MDBF
Heavy Rail (HR)	0	0	255	0.29	23	0.04	14,000
Streetcar Rail (SR)	0	0	0	0.00	4	0.27	1,000
Urban Bus (MB)	0	0	268	0.49	404	0.74	10,918
Commuter Bus (CB)	0	0	4	0.06	2	0.03	18,596
Demand Response (DR)	0	0	46	0.24	39	0.20	22,903
Vanpools (VP)	0	0	4	0.04	0	0.00	53,000

Rate - Per 100,000 Vehicle Revenue Miles MDBF = Mean Distance Between Failures



2022 Regional Transit Safety Data

- From the FTA NTD Safety & Security time-series data:
 - Underlined numbers = exceeded targets

	Fatalities*		Injuries		Safety Events	
	Number	Rate	Number	Rate	Number	Rate
Heavy Rail (HR)	<u>2</u>	<u>0.004</u>	81	0.15	<u>103</u>	<u>0.19</u>
Streetcar Rail (SR)	0	0	<u>1</u>	<u>0.82</u>	<u>7</u>	<u>5.72</u>
Urban Bus (MB)	<u>4</u>	<u>0.01</u>	257	0.45	252	0.44
Commuter Bus (CB)	0	0	0	0	<u>3</u>	<u>0.04</u>
Demand Response (DR)	0	0	35	0.17	<u>63</u>	<u>0.31</u>
Vanpools (VP)	0	0	0	0	0	0

Rate - Per 100,000 Vehicle Revenue Miles

* Excludes suicides



Transit Safety – Staff Observations

- The FTA does not require reporting of performance versus targets by providers of public transportation
- Data submitted to the monthly Safety & Security data series does provide data on three of the four measures for 2022
 - All providers set targets of zero for fatalities, yet the region typically experiences several each year.
 - Injuries for Heavy Rail were significantly lower than the target.
 - Safety Events for Heavy Rail, Streetcar, Commuter Bus and Demand Response exceeded targets.
- Providers are still refining the target-setting process, as the implementation of this PBPP rulemaking coincided with the onset of the pandemic and experience to date has been impacted by the changes made in transit service during the pandemic



2023 Regional Transit Safety Targets - **DRAFT**

	Fatalities		Injuries		Safety Events		Reliability
	Number	Rate	Number	Rate	Number	Rate	MDBF
Heavy Rail (HR)	0	0	146	18.30	41	5.20	25,000
Streetcar Rail (SR)	0	0	0	0.00	4	0.27	1,000
Urban Bus (MB)	0	0	351	0.58	356	0.59	11,378
Commuter Bus (CB)	0	0	1	0.01	0	0	33,401
Demand Response (DR)	0	0	49	0.24	59	0.29	0
Vanpools (VP)	0	0	0	0	0	0.00	0

Rate - Per 100,000 Vehicle Revenue Miles

MDBF = Mean Distance Between Failures



Highway Safety Targets



Part II – Highway Safety Presentation Items

- Highway Safety Requirements
- Highway Safety Measures
- Highway Safety Target-Setting Methodology
- Highway Safety Trends 2018 through 2022
- 2018-2022 Highway Safety Targets and Performance
- Draft 2020-2024 Regional Roadway Safety Targets



Federal Requirements – Highway Safety Plans

- Federal PBPP regulations require State DOTs and MPOs to:
 - Adopt annual safety performance targets for five (5) safety performance measures
 - Measure and report progress towards those targets each year
 - State DOTs are required to report their safety targets annually through their HSIP report by August 31, and MPOs are required to report their safety targets within 180 days thereafter
- Requirement supports implementation of the Highway Safety Improvement Program (HSIP), which requires States to improve highway safety on public roads using a data-drive, strategic approach



Highway Safety Performance Measures

Performance Measure	Description
Number of Fatalities (5 year rolling average)	Total number of fatalities during a calendar year
Rate of Fatalities per 100 million VMT (5 year rolling average)	Ratio of total fatalities to VMT
Number of Serious Injuries (5 year rolling average)	Total number of serious injuries during a calendar year
Rate of Serious Injuries per 100 million VMT (5 year rolling average)	Ratio of total serious injuries to VMT
Number of Non-Motorized Fatalities and Serious Injuries (5 year rolling average)	Total number of fatalities and serious injuries during a calendar year



Highway Safety – Target Setting Methodology

- TPB targets for each performance measure is a composite of sub-targets developed for each State
 - Apply Maryland’s approach to identify a “sub-target” for the Maryland portion of the NCR
 - Apply a modified version of Virginia’s suggested approach for its MPOs to identify a sub-target for the Virginia portion of the NCR
 - Incorporate the District of Columbia’s target as a sub-target for the DC portion of the NCR
 - Combine the three sub-targets into a regional target for the NCR
 - *If a calculated target is higher than the previous target, set the target equal to the previous target, i.e., target is “capped”*



NCR Annual Highway Safety Data: 2018 through 2022

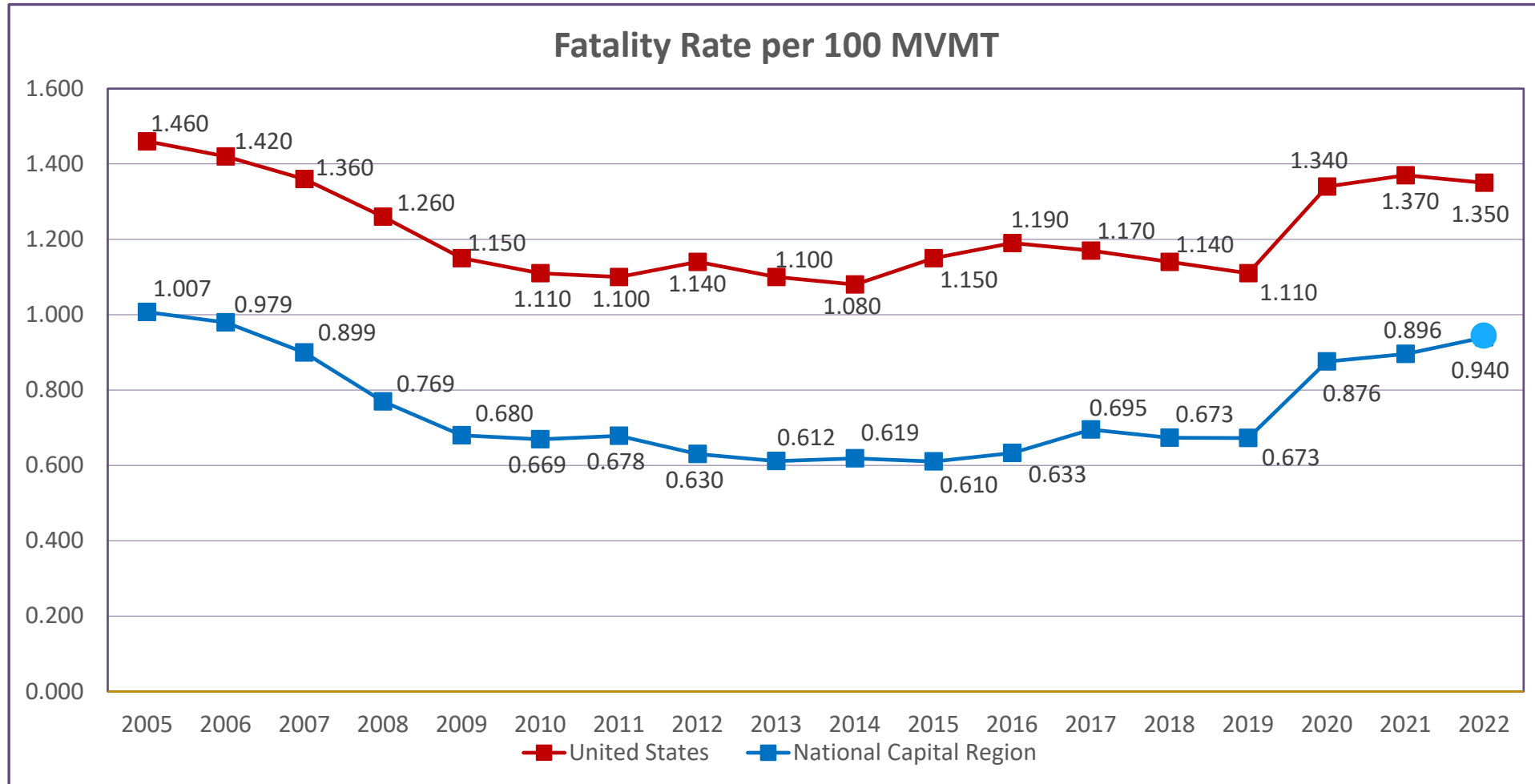
	2018	2019	2020	2021	2022	Change from 2021-2022
# of Fatalities	303	306	321	364	382 ¹	↑ 4.9%
Fatality Rate (per 100 MVMT)	0.673	0.673	0.876	0.896	0.940 ^{1,2}	↑ 4.9 %
# of Serious Injuries	2,464	2,371	1,839	2,221	2,178	↓ 1.9 %
Serious Injury Rate (per 100 MVMT)	5.473	5.211	5.016	5.464	5.358 ²	↓ 1.9 %
# Nonmotorist Fatalities & Serious Injuries	553	593	443	520	637	↑ 22.5 %

Note¹: Figures listed are from state fatality data; 2022 FARS data not yet published. Fatality counts meet federal criteria for traffic fatalities.

Note²: 2021 regional VMT data was used to calculate rates pending the availability of 2022 regional VMT data



Fatality Rates: USA and National Capital Region



2018-2022 NCR Actual Performance vs. Targets

Performance Measure (5-year rolling average)	Adopted 2018-2022 Targets	Actual 2018-2022 Performance	Status
# of Fatalities	253.0	335.2 ¹	Not met
Fatality Rate (per 100 MVMT)	0.588	0.804 ^{1,2}	Not met
# of Serious Injuries	1,889.7	2,214.6	Not met
Serious Injury Rate (per 100 MVMT)	3.867	5.305 ²	Not met
# Nonmotorist Fatalities & Serious Injuries	492.4	549.8	Not met

Note¹: Figures listed are from state fatality data; 2022 FARS data not yet published. Fatality counts meet federal criteria for traffic fatalities.

Note²: 2021 regional VMT data was used to calculate rates pending the availability of 2022 regional VMT data



Highway Safety – Staff Observations

- Roadway fatalities and serious injuries moderated in 2022 compared to 2021
 - Roadway fatalities continue to increase but at a slower rate compared to 2021
 - Suggests that traffic fatalities may be starting to level-off but more data is needed to establish trend
 - Serious injuries resumed their decline in 2022
- Increase in nonmotorist fatalities and serious injuries is notable
- NCR safety performance continues to be better than national average



NCR Highway Safety Targets (*pre-cap*) - **DRAFT**

	Adopted 2019-2023 Targets	DRAFT 2020-2024 Targets	Difference	Percent Difference
# of Fatalities	253.0	<u>299.3</u>	46.3	18.3%
Fatality Rate (per 100 MVMT)	0.588	<u>0.700</u>	0.112	19.0%
# of Serious Injuries	1,757.4	<u>1,675.7</u>	-81.7	-4.6%
Serious Injury Rate (per 100 MVMT)	3.733	<u>3.222</u>	-0.511	-13.7%
# Nonmotorist Fatalities & Serious Injuries	486.9	<u>473.5</u>	-13.4	-2.8%



NCR Highway Safety Targets (*with cap*) - **DRAFT**

	Adopted 2019-2023 Targets	DRAFT 2020-2024 Targets	Difference	Percent Difference
# of Fatalities	253.0	<u>253.0</u> ←	0.0	0.0%
Fatality Rate (per 100 MVMT)	0.588	<u>0.588</u> ←	0.0	0.0%
# of Serious Injuries	1,757.4	<u>1,675.7</u>	-81.7	-4.6%
Serious Injury Rate (per 100 MVMT)	3.733	<u>3.222</u>	-0.511	-13.7%
# Nonmotorist Fatalities & Serious Injuries	486.9	<u>473.5</u>	-13.4	-2.8%



Summary: NCR Highway Safety Targets - **DRAFT**

Performance Measure (5-year rolling average)	Adopted 2019-2023 Targets	DRAFT 2020-2024 Targets	Difference	Percent Difference
# of Fatalities	253.0	<u>253.0</u>	0.0	0.0%
Fatality Rate (per 100 MVMT)	0.588	<u>0.588</u>	0.0	0.0%
# of Serious Injuries	1,757.4	<u>1,675.7</u>	-81.7	-4.6%
Serious Injury Rate (per 100 MVMT)	3.733	<u>3.222</u>	-0.511	-13.7%
# Nonmotorist Fatalities & Serious Injuries	486.9	<u>473.5</u>	-13.4	-2.8%



Part III – Next Steps

- Finalize targets based on any revised information and board feedback
- December 20: Request board approval of final regional targets for transit safety and highway safety performance measures



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