

UPDATE ON REGIONAL ROADWAY SAFETY PLANNING

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Community Advisory Committee
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Presentation Items

- TPB Safety Planning – pre-2018
- MAP-21: MPO Target Setting Requirements
- TPB's Reaction to the Safety Targets
- Regional Safety Study
- TPB Resolution R3-2021
- Equity Analysis
- Regional Roadway Safety Program
- Future Directions



TPB Safety Planning – pre-2018



TPB Safety Planning – pre-2018

- Street Smart
- Transportation Safety Subcommittee



Street Smart

- Education through Mass Media
 - One media campaign for one media market
 - <http://bestreetsmart.net>
- Concentrated waves of Gas Station, Transit, TV and Internet advertising designed to change driver, pedestrian, and cyclist behavior
 - Fall and Spring Waves
- Since Fall 2002
- Supported by concurrent law enforcement
- Advisory Group
- Funded by:
 - Federal funds administered by DC, Maryland, and Virginia
 - WMATA, DC local funds
 - TPB Member Governments - COG dues (63k)
 - FY 2021 Budget – \$820k for consultant, ad placement



Transportation Safety Subcommittee

- Meets 6 times per year
- Forum to exchange information and best practices among member jurisdictions
- Coordination with MDOT, VDOT, and DDOT on their respective SHSPs and HSPs
- Advises on safety inputs to the Constrained Long-Range Plan (CLRP)



MAP-21: MPO Target Setting Requirements



Federal Requirements

- Federal requirement for MPOs to update highway safety targets on an annual basis
- Highway safety targets to be set for 5 performance measures
- Targets shall be data-driven and realistic
- Targets are averages for a given 5-year period (ex., 2016-2020, 2017-2021, etc.)



Highway Safety Performance Measures

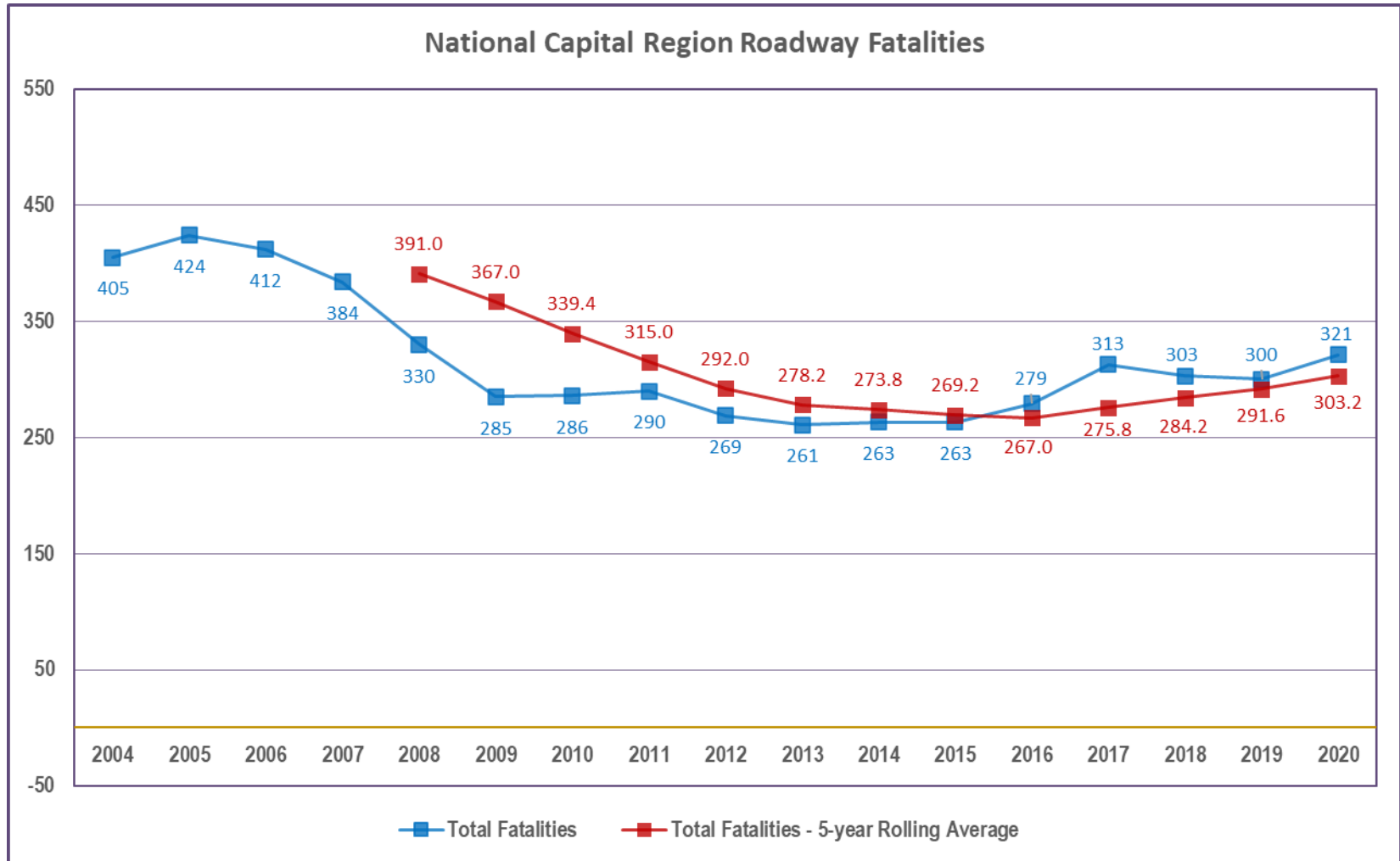
Performance Measure	Description	Data Source
Number of Fatalities (5 year rolling average)	Total number of fatalities during a calendar year	FARS ¹
Rate of Fatalities per 100 million VMT (5 year rolling average)	Ratio of total fatalities to VMT	FARS and HPMS ² (or MPO estimate)
Number of Serious Injuries (5 year rolling average)	Total number of serious injuries during a calendar year	State reported serious injury data
Rate of Serious Injuries per 100 million VMT (5 year rolling average)	Ratio of total serious injuries to VMT	State reported serious injury data and HPMS
Number of Non-Motorized Fatalities and Serious Injuries (5 year rolling average)	Total number of fatalities and serious injuries during a calendar year	FARS and State serious injury data

¹ FARS: Fatality Analysis Reporting System

² HPMS: Highway Performance Monitoring System



National Capital Region: Roadway Fatalities



Recommended Roadway Safety Targets

Performance Measure	2018-2022 Target
Number of Fatalities (5 year rolling average)	253.0
Rate of Fatalities per 100 million VMT (5 year rolling average)	0.588
Number of Serious Injuries (5 year rolling average)	<u>1,889.7</u>
Rate of Serious Injuries per 100 million VMT (5 year rolling average)	<u>3.867</u>
Number of Non-Motorized Fatalities and Serious Injuries (5 year rolling average)	<u>492.4</u>



TPB's Reaction to the Safety Targets



Board Discussion: Safety Targets

- Board member input:
 - Support for more aspirational targets...
 - Even more support for finding ways to reduce fatalities
 - High level of interest in the regional safety study
 - Directed our state DOT members to update the TPB quarterly on their safety efforts

"...we need to add something to the resolution that says we need to be more aggressive than the goals we have been presented..."

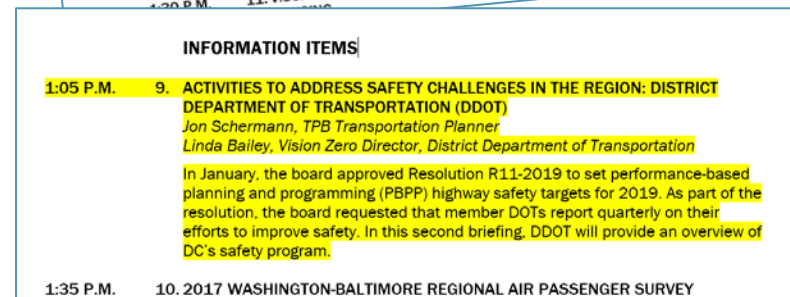
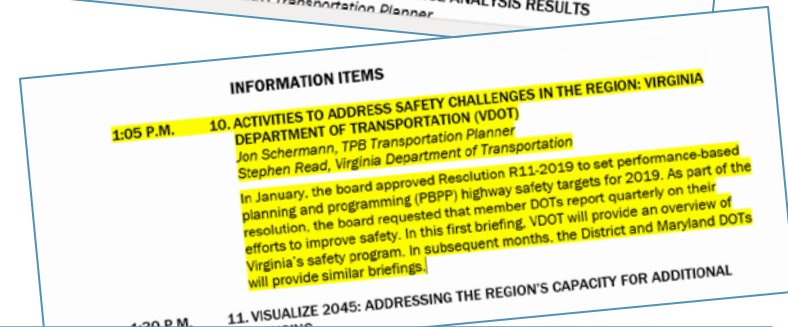
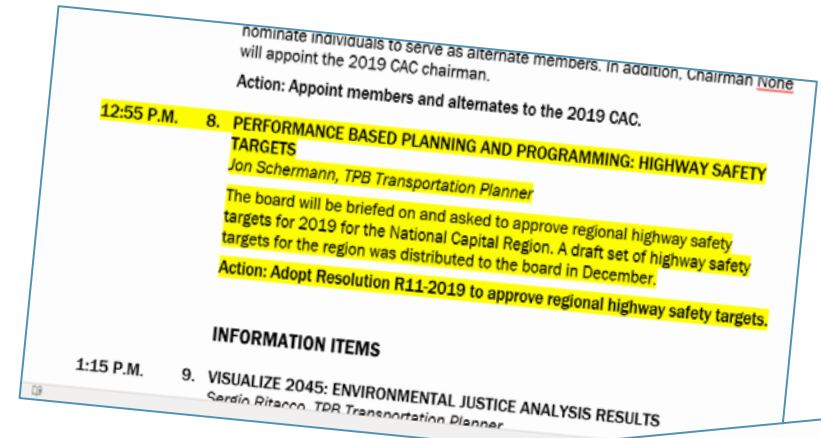
"...I would agree we need to be as aggressive and aspirational as possible with these goals, but I would also argue that our goals are fairly meaningless unless we actually have the policies and the initiatives to achieve said goals..."

"What keeps going through my mind is that we just have the numbers, we don't have the "why" behind the numbers..."

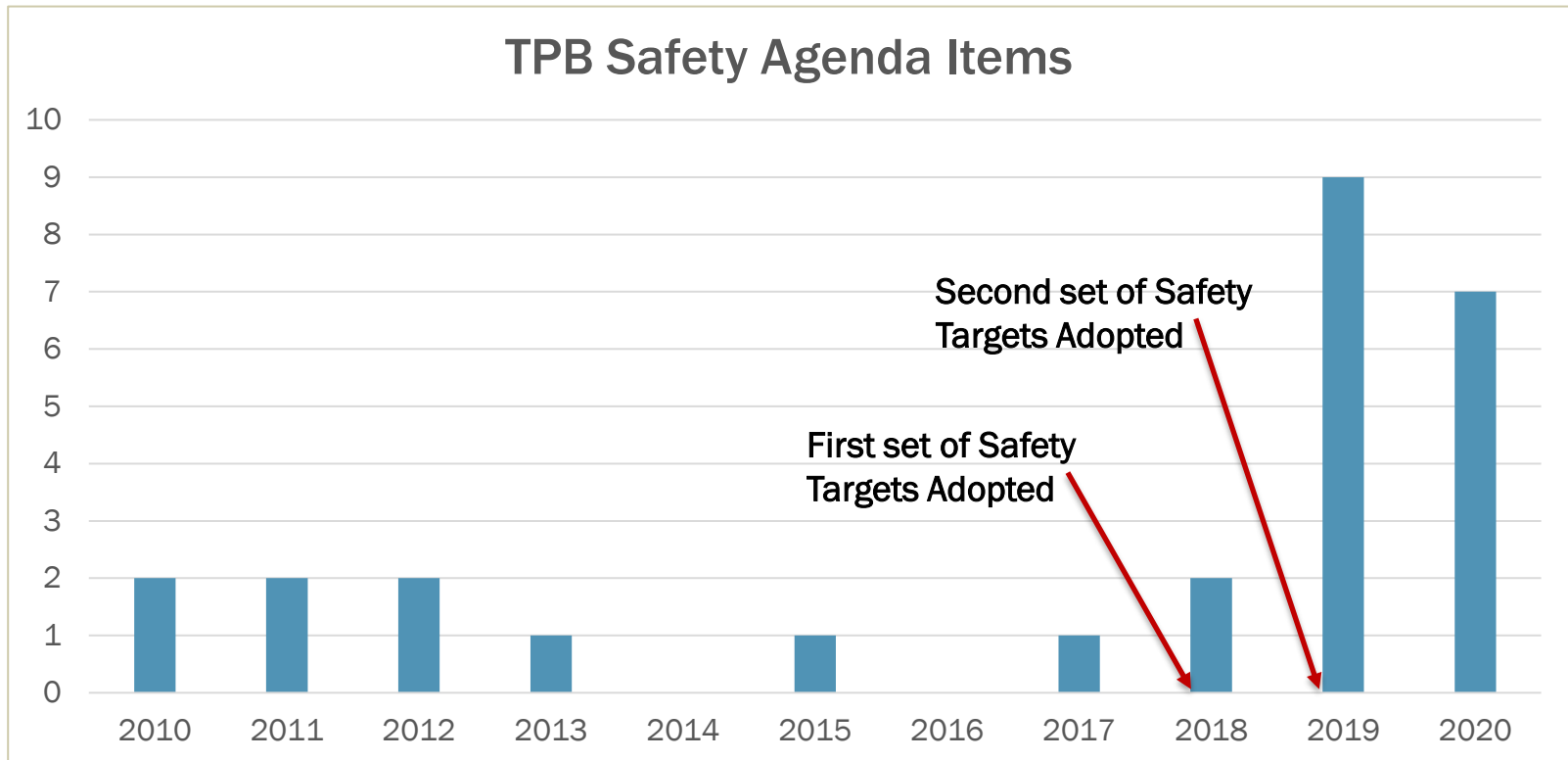


Safety Engagement

- State DOT Safety Updates:
 - March, April, May, September, October of 2019
- Regional Safety Study:
 - June 2019 kickoff
 - Recommendations – Spring 2020
 - TPB Resolution – July 2020
- Regional Safety Program
 - \$250k UPWP funds
 - Annual Program



Safety Is On the Agenda!



Source: TPB staff analysis



Regional Roadway Safety Study



Study Overview

- Objectives

- to understand the factors contributing to fatal and serious injury crashes in the National Capital Region (NCR);
- to determine where crashes on the roadway transportation network are over-represented;
- to identify and recommend proven effective solutions (policy, programmatic, project);
- to provide the TPB and member jurisdictions specific suggestions to improve safety; and
- to inform future Transportation Safety Subcommittee and Street Smart efforts.

- Project Timeline

- Original contract through February 2020 – extended through June 2021



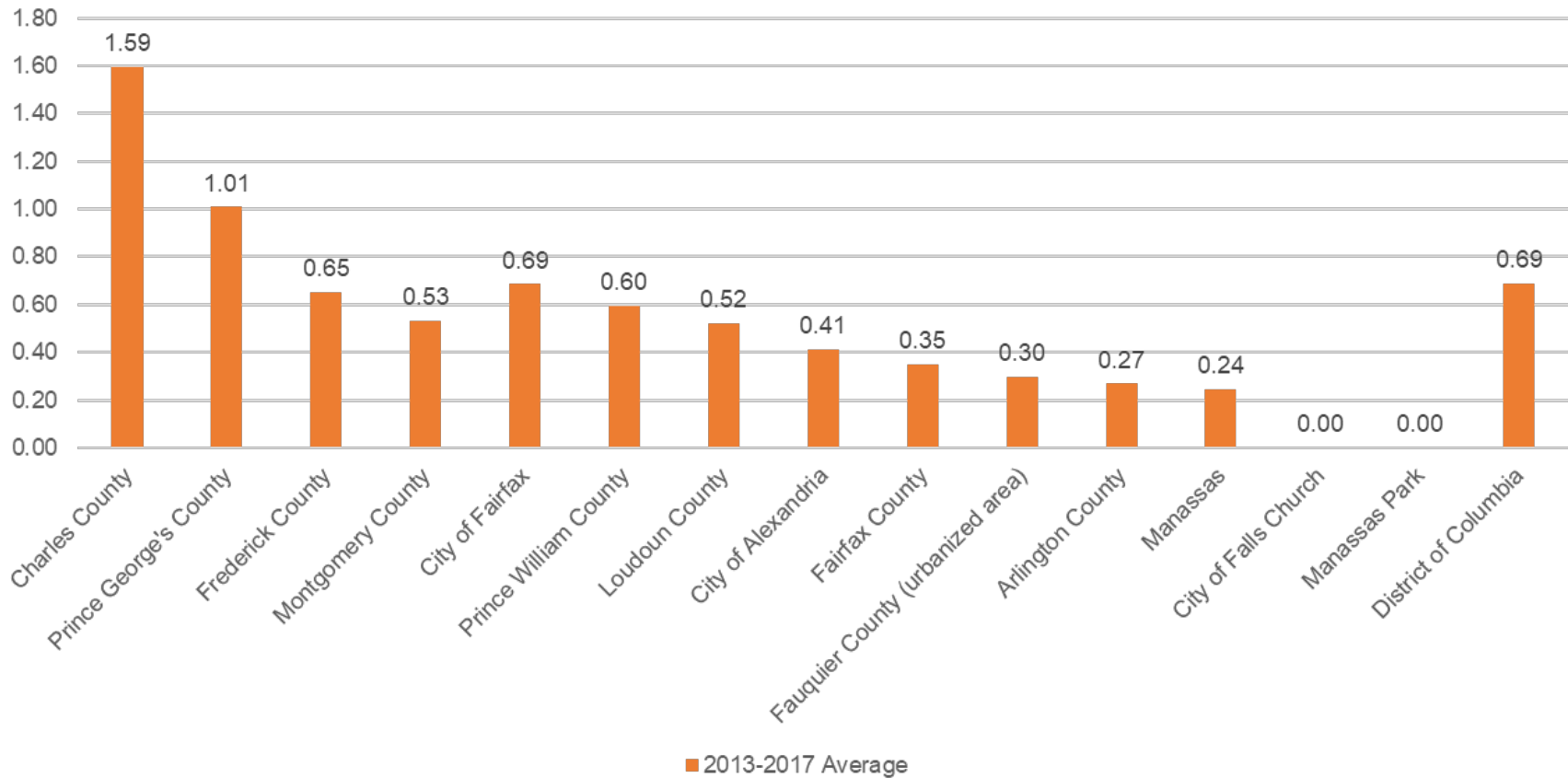
Crashes by Jurisdiction (2013-2017)

Crash Severity by Jurisdiction			
Jurisdiction	Fatalities	Serious Injuries	Total Crashes
District of Columbia	124	1,765	118,166
Charles County, MD	103	955	13,391
Frederick County, MD	101	475	16,207
Montgomery County, MD	200	1,998	64,598
Prince George's County, MD	455	2,363	76,381
Arlington County, VA	21	303	12,592
Fairfax County, VA	172	3,423	68,645
Fauquier County, VA (urbanized area)	3	78	1,706
Loudoun County, VA	69	899	23,195
Prince William County, VA	104	1,117	28,306
Alexandria, VA	15	220	8,701
Fairfax City, VA	6	108	2,967
Falls Church, VA	0	79	681
Manassas, VA	2	324	2,933
Manassas Park, VA	0	7	382
Urban Core	160	2,288	139,459
Inner Suburbs	833	7,971	213,272
Outer Suburbs	382	3,855	86,120
Total	1,375	14,114	438,851



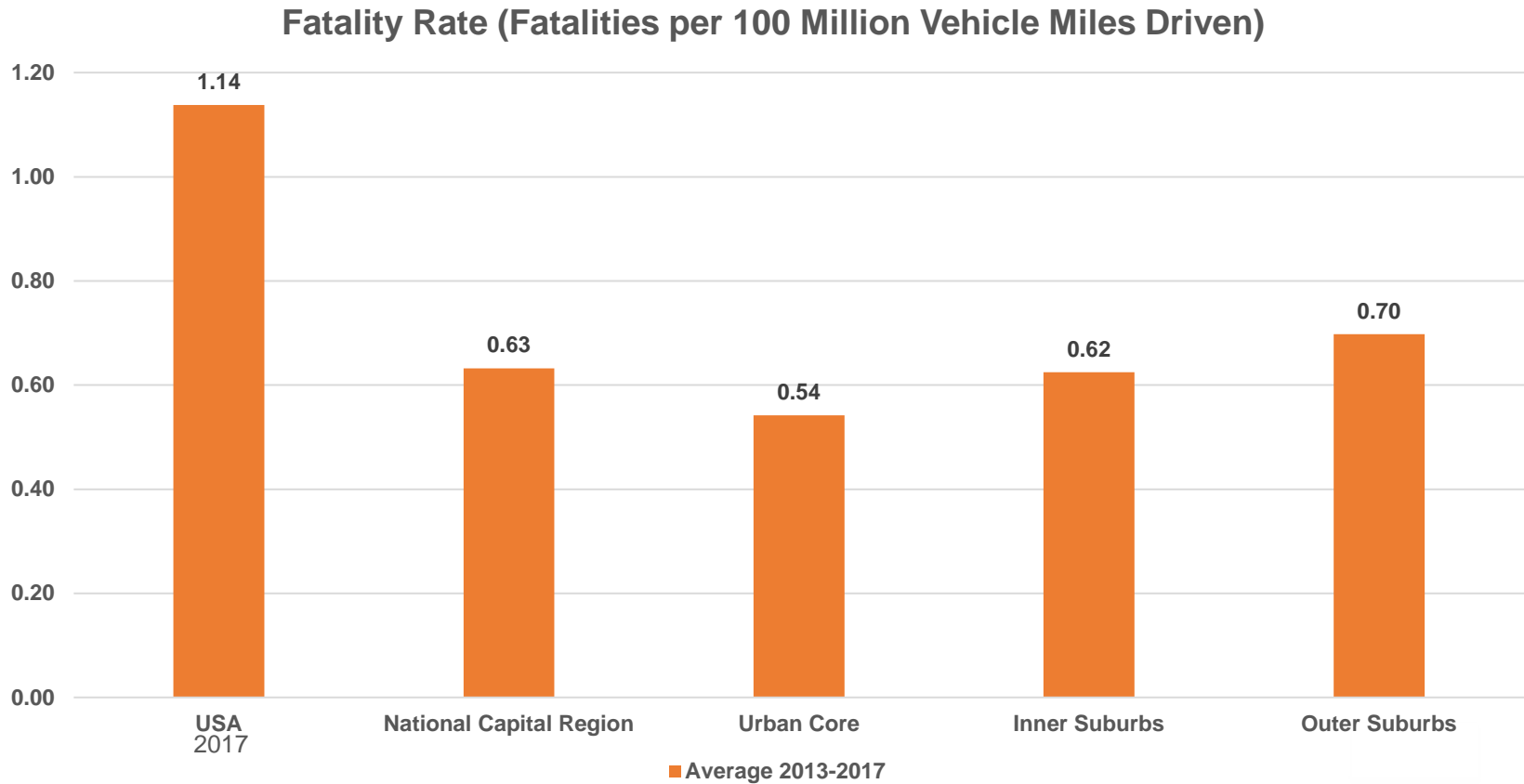
Fatality Rate by Jurisdiction

(per 100 million vehicle miles traveled)

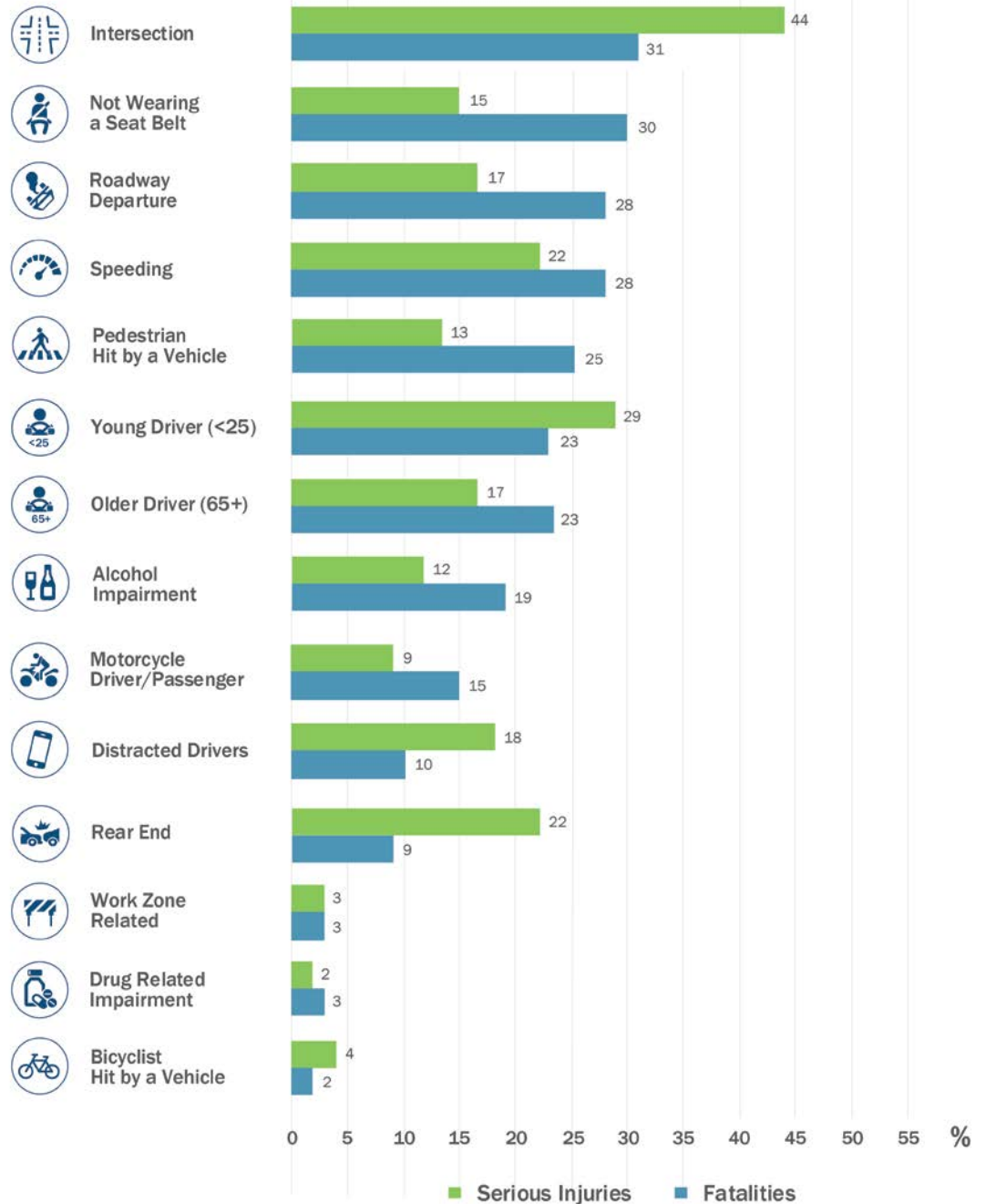


Fatality Rate by Sub-regional Area

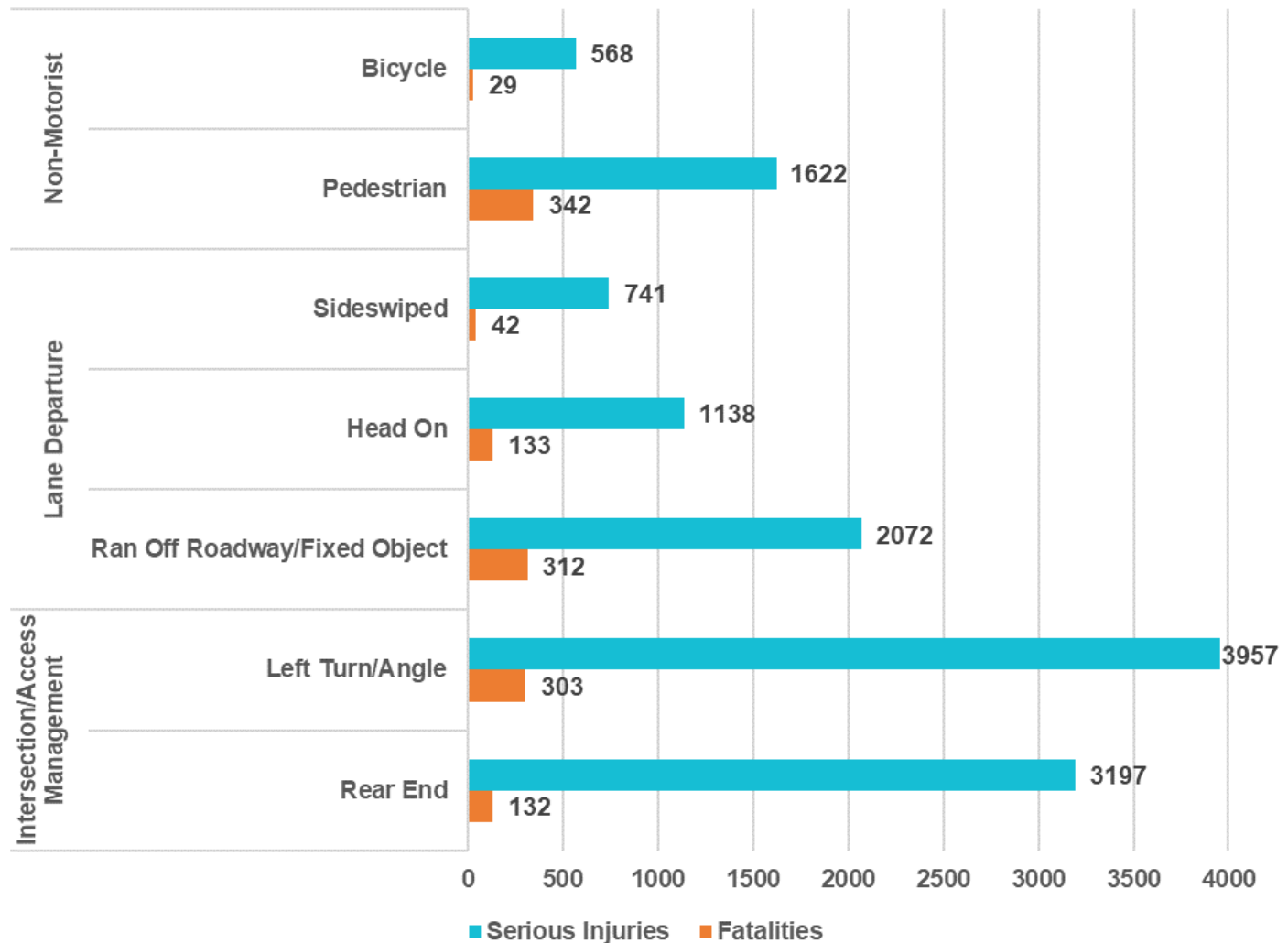
(per 100 million vehicle miles traveled)



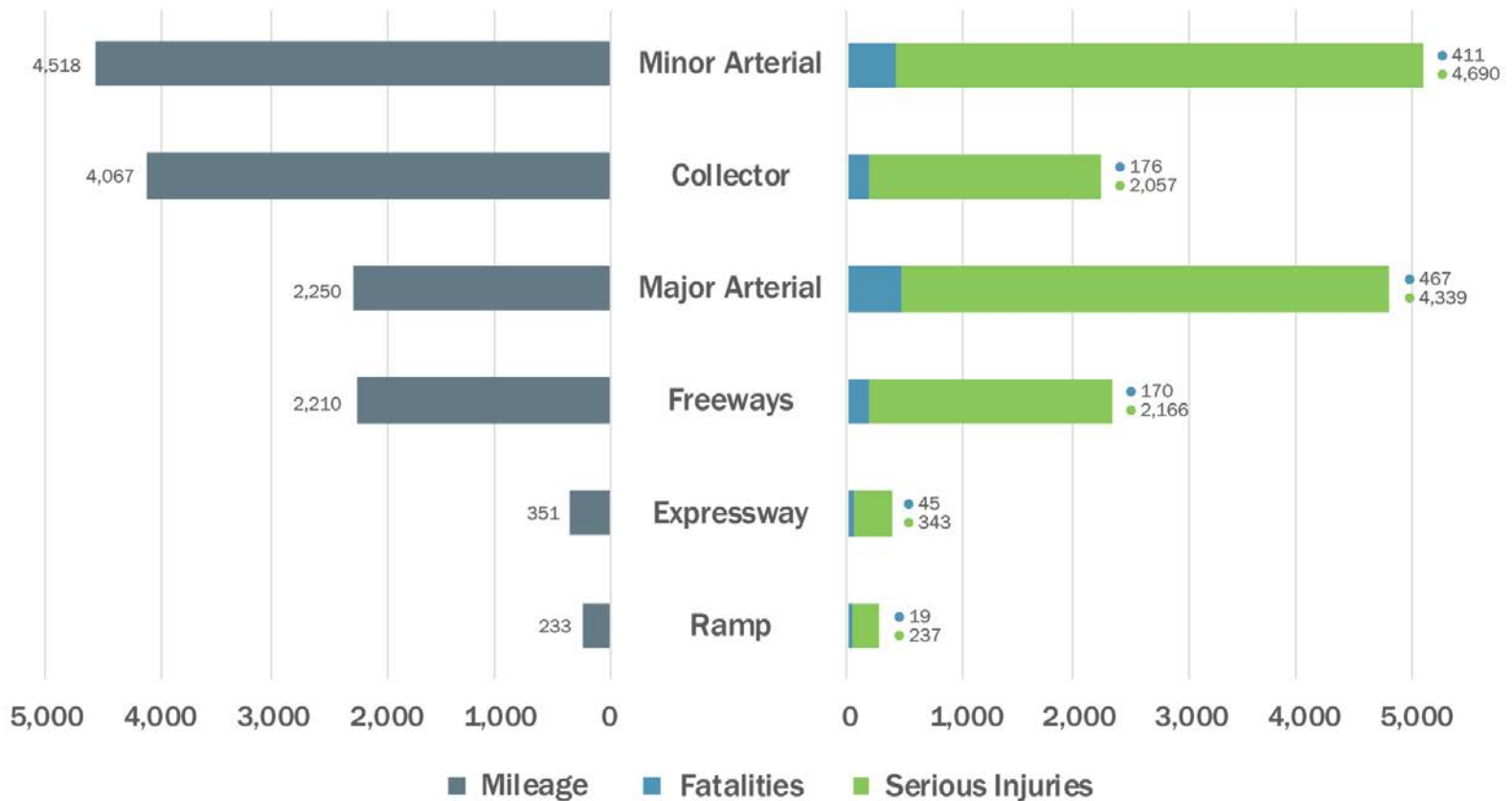
Crash Contributing Factors (2013-2017)



Crash Types (2013-2017)



Functional Class (2013-2017)



Deeper Dives

- Pedestrians
- Intersections
- Arterials



PEDESTRIANS



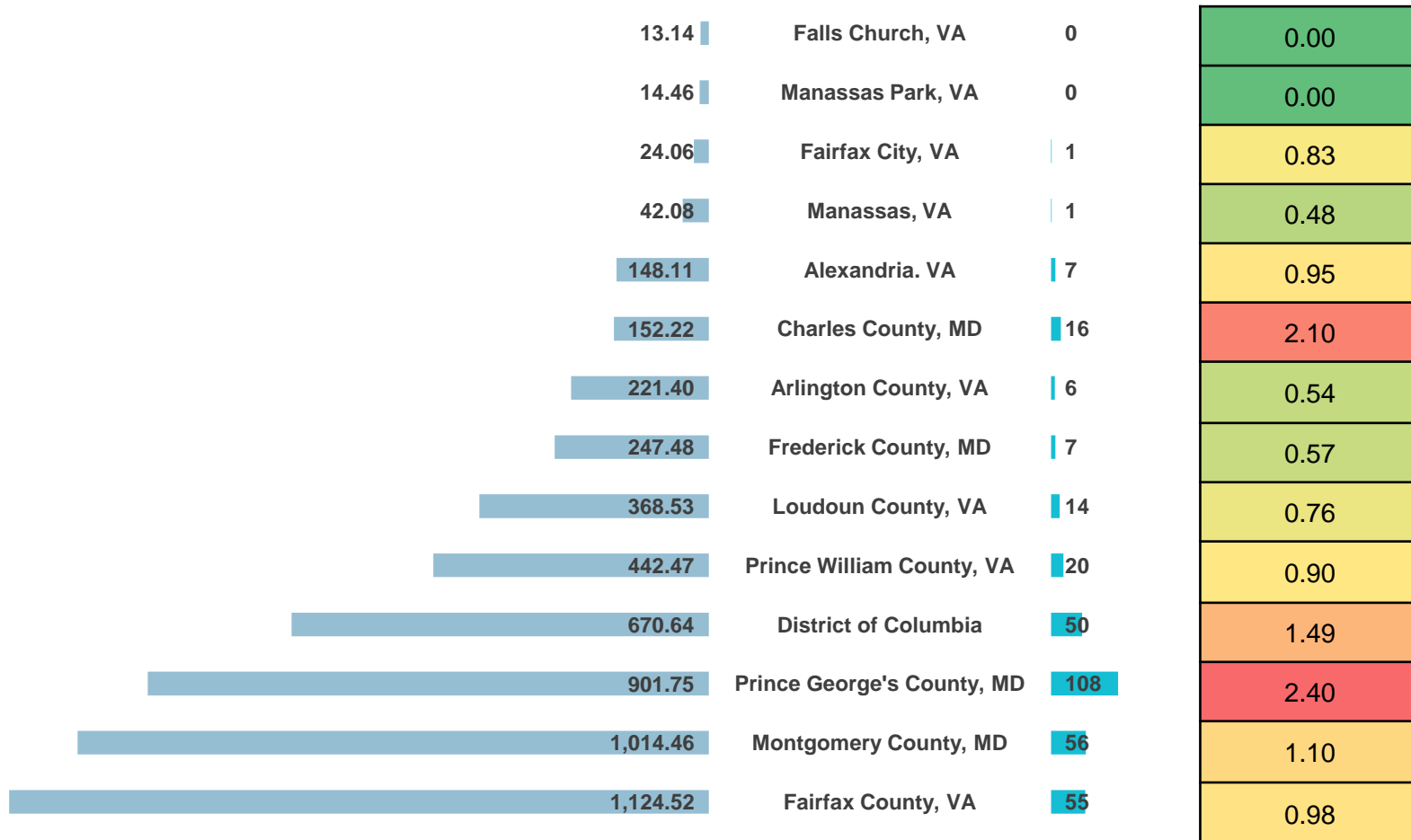
Pedestrian Crash Severity By Jurisdiction

Pedestrian Crash Severity by Jurisdiction			
Jurisdiction	Fatalities	Serious Injuries	Total Crashes
District of Columbia	50	399	5,431
Charles County, MD	16	49	208
Frederick County, MD	7	36	284
Montgomery County, MD	56	318	2,297
Prince George's County, MD	108	269	2,156
Arlington County, VA	6	74	693
Fairfax County, VA	55	331	1,024
Fauquier County, VA (urbanized area)	1	7	24
Loudoun County, VA	14	57	235
Prince William County, VA	20	96	299
Alexandria, VA	7	58	338
Fairfax City, VA	1	21	54
Falls Church, VA	0	13	30
Manassas, VA	1	39	74
Manassas Park, VA	0	0	7
Urban Core	63	531	6,462
Inner Suburbs	220	952	5,561
Outer Suburbs	59	284	1,131
National Capital Region Total	342	1,767	13,154



Pedestrian Fatality Rate by Population

Fatalities per 100,000 people



■ Average Population 2013-2017 (1,000's) ■ Pedestrian Fatalities



Pedestrian Crash Severity by Time of Day

Pedestrian Injury Severity by Time of Day			
Time of Day	Fatalities	Serious Injuries	Total Crashes
Midnight - 0:59 a.m.	11	37	206
1:00 a.m. - 1:59 a.m.	13	35	161
2:00 a.m. - 2:59 a.m.	13	35	163
3:00 a.m. - 3:59 a.m.	7	31	131
4:00 a.m. - 4:59 a.m.	10	4	67
5:00 a.m. - 5:59 a.m.	15	29	187
6:00 a.m. - 6:59 a.m.	24	65	390
7:00 a.m. - 7:59 a.m.	12	85	623
8:00 a.m. - 8:59 a.m.	3	88	673
9:00 a.m. - 9:59 a.m.	7	57	543
10:00 a.m. - 10:59 a.m.	11	59	498
11:00 a.m. - 11:59 a.m.	8	64	547
12:00 p.m. - 12:59 p.m.	6	64	531
1:00 p.m. - 1:59 p.m.	5	68	588
2:00 p.m. - 2:59 p.m.	9	84	726
3:00 p.m. - 3:59 p.m.	11	107	872
4:00 p.m. - 4:59 p.m.	12	104	862
5:00 p.m. - 5:59 p.m.	12	151	1,103
6:00 p.m. - 6:59 p.m.	25	166	1,151
7:00 p.m. - 7:59 p.m.	26	137	911
8:00 p.m. - 8:59 p.m.	34	103	757
9:00 p.m. - 9:59 p.m.	33	99	632
10:00 p.m. - 10:59 p.m.	28	92	518
11:00 p.m. - 11:59 p.m.	18	65	311



Pedestrian Crash Severity by Month

Pedestrian Injury Severity by Month			
Month	Fatalities	Serious Injuries	Total Crashes
January	28	151	1,162
February	28	136	929
March	27	145	984
April	23	149	1,027
May	31	155	1,101
June	23	150	1,087
July	22	109	892
August	29	160	967
September	24	156	1,117
October	40	180	1,389
November	38	163	1,242
December	40	176	1,257



Pedestrian Crash Severity by Location

Injury Severity by Pedestrian Location			
Pedestrian Location	Fatalities	Serious Injuries	Total Crashes
Unknown	65	414	4,270
Unmarked Crosswalk	6	54	386
Marked Crosswalk	61	536	3,927
Sidewalk	7	33	252
In Roadway/Unmarked Midblock/Not at Intersection	197	675	3,770
Median/Island	2	4	28
Outside Roadway	15	114	521



Driver Age in Pedestrian Crashes

Driver Age in Pedestrian Crashes			
Driver Age	Fatal Pedestrian Crashes	Serious Injury Pedestrian Crashes	Total Drivers in Pedestrian Crashes
Younger than 5	0	0	0
5-9	0	0	0
10-14	0	0	0
15-19	12	52	280
20-24	32	159	960
25-29	34	174	1,213
30-34	37	180	1,190
35-39	32	164	1,012
40-44	36	144	947
45-49	30	173	998
50-54	36	142	1,033
55-59	34	133	952
60-64	20	101	759
65-69	16	97	588
70-74	5	49	395
75-79	8	44	259
80-84	6	20	165
Older than 84	42	158	1,079



TPB Resolution R3-2021



Resolution R3-2021

The National Capital Region Transportation Planning Board urges its members to reaffirm road user safety as a top priority and prioritize the implementation of projects, programs, and policies, in an equitable and non-racist manner, consistent with the TPB's Equity Policy statement, that strive to reduce the number of fatal and serious injury crashes on the Region's roadways by taking the actions, working individually and/or collectively, described in Sections 1 through 4 below.

Section 1:

- Increase seat belt use among all occupants in a motor vehicle;
- Reduce unsafe vehicle speeds on all roadways in the region;
- Reduce impaired and distracted driving.

Section 2:

Identify and implement applicable countermeasures, especially those outlined in the table shown below, as appropriate and on a case-by-case basis, in an equitable and non-racist manner, consistent with the TPB's Policy Statement on Equity.



Resolution R3-2021 - continued

Section 3:

Establish and fund a Regional Safety Program at the TPB, beginning in fiscal year 2021, to assist its member jurisdictions and the region to develop and/or implement projects, programs or policies to equitably improve safety outcomes for all roadway users. Funding for the first year of the Regional Safety Program will total \$250,000 which will be provided through the TPB's Unified Planning Work Program.

Section 4:

- Calls upon all its member jurisdictions and agencies to adopt safety goals consistent with Vision Zero or Towards Zero Death policies and develop local roadway safety plans and ensure their equitable impacts on all road users.
- Calls upon its member states to adopt procedures that increase the use of ignition interlock devices for impaired driving offenders.

Resolution R3-2021



Equity Analysis

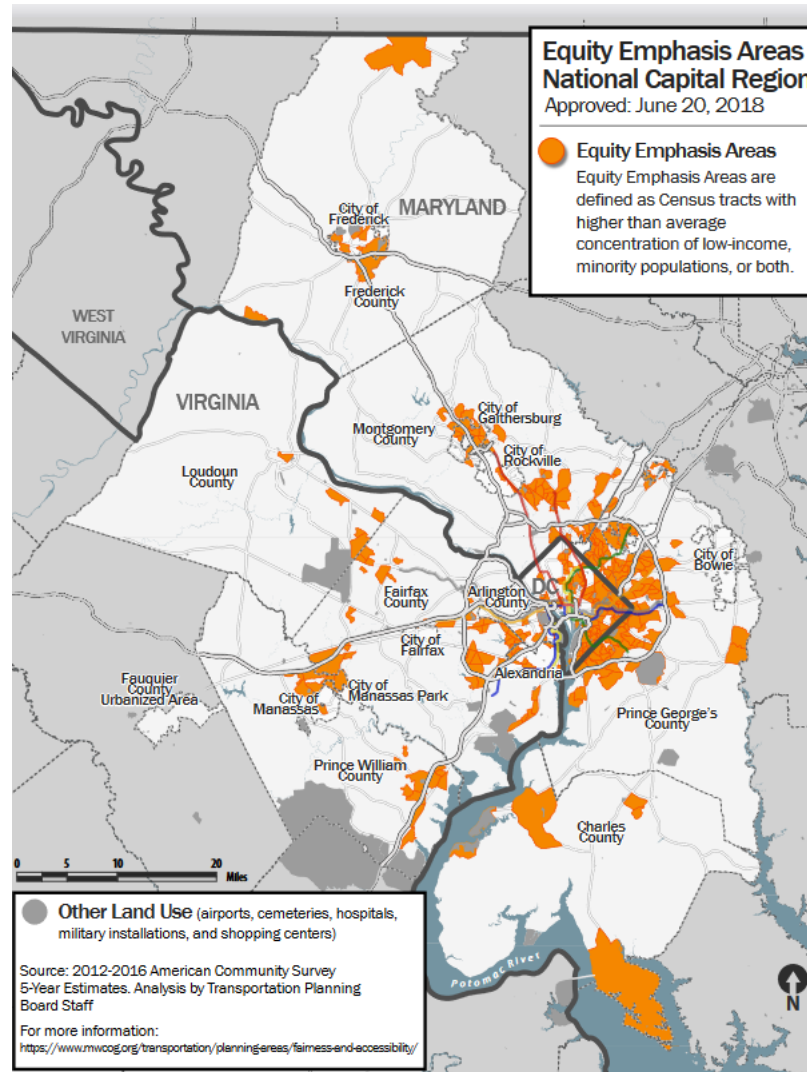


Decision to Incorporate An Equity Analysis

- Board Action – July 2020
 - TPB Resolution R3-2021: “safety” resolution
 - TPB Resolution R1-2021: TPB Equity Statement:
“The TPB affirms that equity, as a foundational principle, will be woven throughout TPB’s analyses, operations, procurement, programs, and priorities to ensure a more prosperous, accessible, livable, sustainable, and equitable future for all residents...”



Equity Emphasis Areas



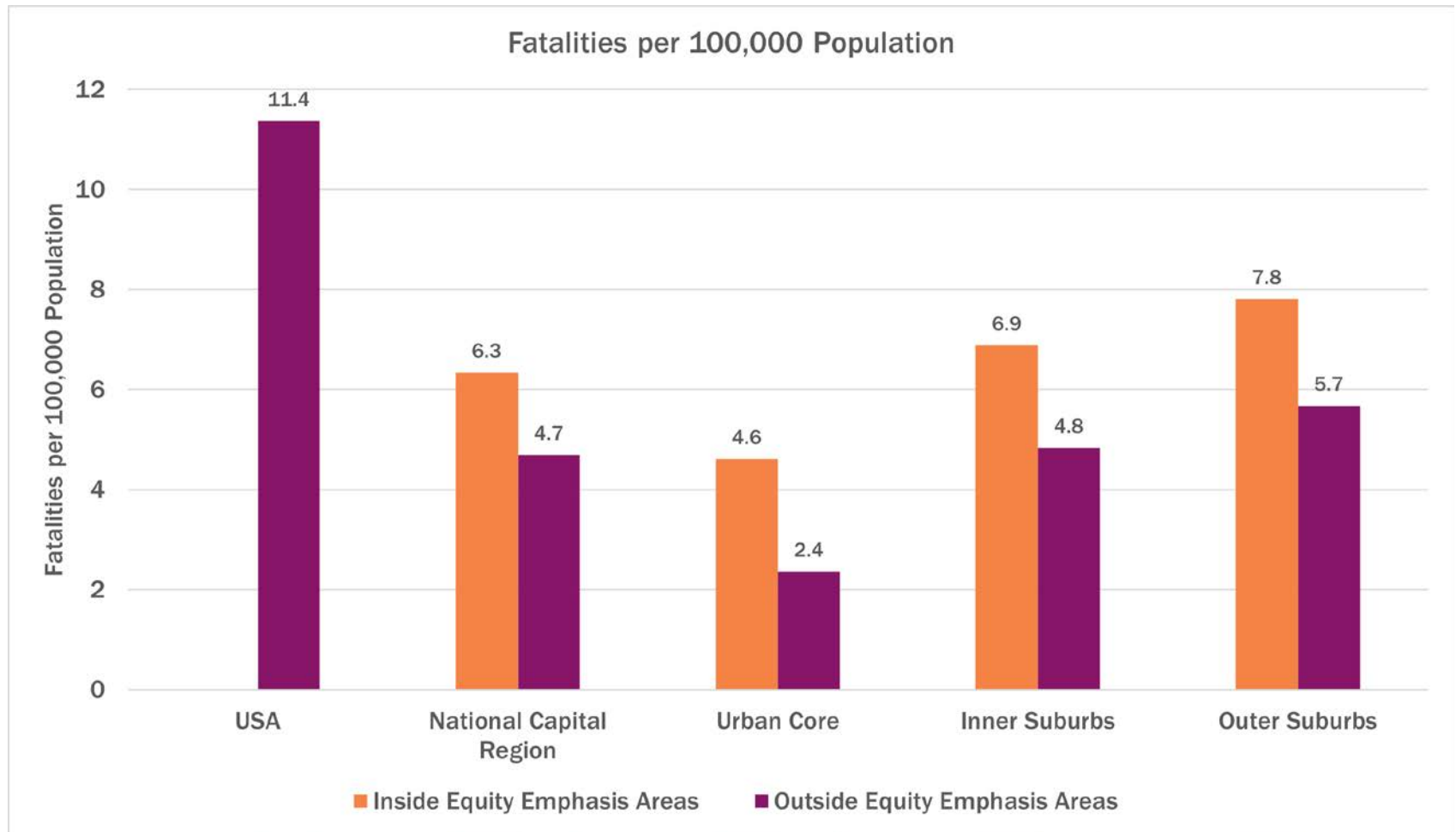
Equity Emphasis Areas Population

Jurisdiction	Average Population in EEAs	Percentage of Population in EEAs	Percentage of Fatalities in EEAs	Percentage of Serious Injuries in EEAs
Urban Core	447,026	42.3%	58.9%	46.8%
District of Columbia	355,176	55.0%	65.9%	54.4%
Arlington County	46,778	20.7%	14.3%	16.4%
City of Alexandria	45,072	29.8%	57.9%	25.6%
Inner Suburbs	880,947	28.4%	36.1%	27.3%
Montgomery County	254,559	24.8%	44.0%	28.9%
Prince George's County	412,062	45.9%	41.0%	39.2%
Fairfax County	214,326	18.9%	16.2%	18.0%
Outer Suburbs	199,793	15.5%	19.8%	19.6%
Charles County	18,058	11.7%	13.9%	21.7%
Frederick County	39,929	16.4%	21.4%	24.2%
Loudoun County	25,837	7.1%	11.9%	8.7%
Prince William County	101,648	22.9%	30.0%	29.7%
Manassas	7,556	18.4%	16.7%	11.0%
Manassas Park	6,765	42.7%	0.0%	42.9%
National Capital Region	1,527,766	28.0%	34.4%	28.7%

Source data for EEA Populations: Analysis of U.S. Census 2012-2016 ACS 5-year estimates

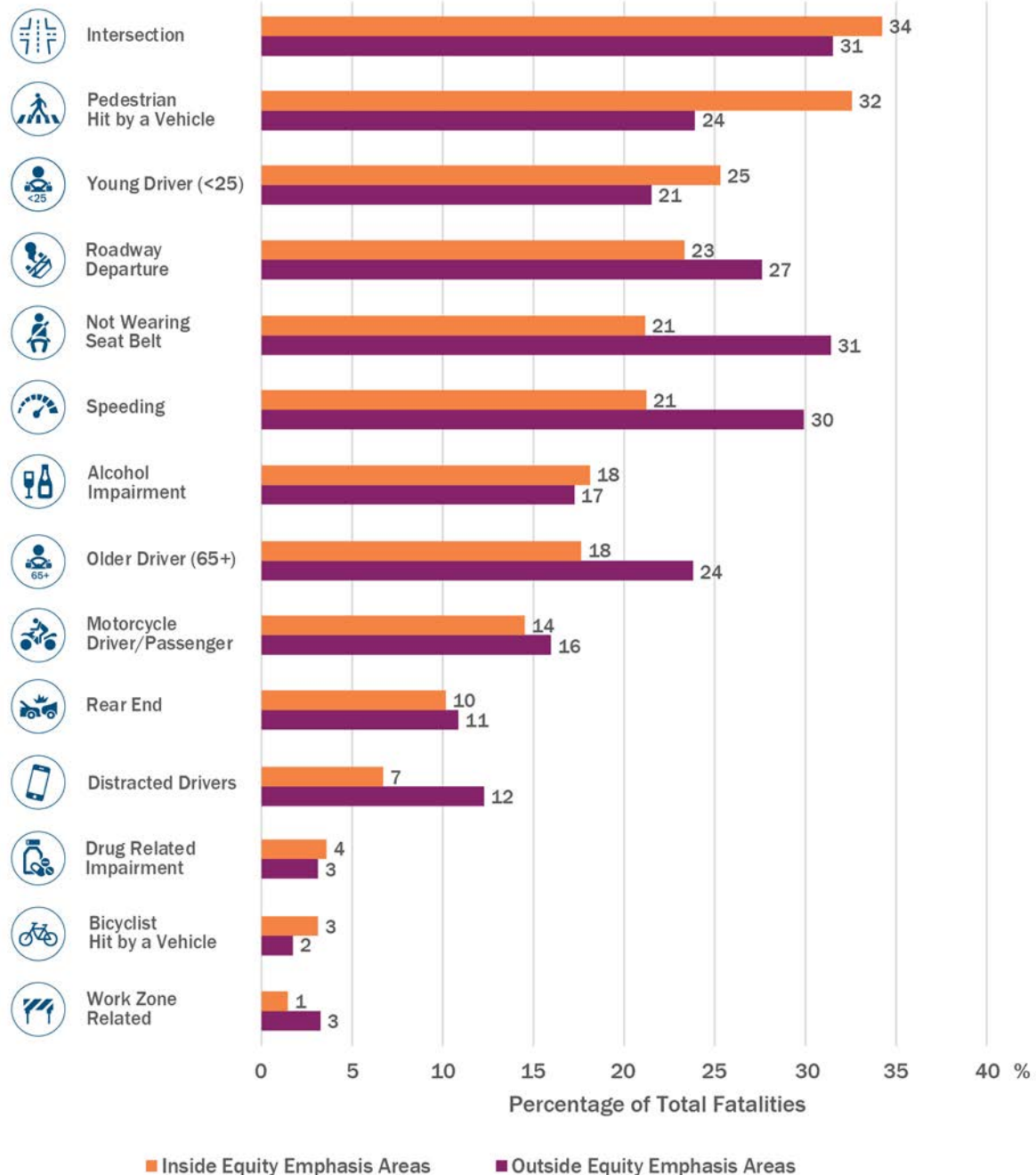


Fatalities per 100,000 Population (2014-2018)



Contributing Circumstances - Fatality Percentage (2014-2018)

Percentage of Total Fatalities by Contributing Circumstance



Ongoing Actions

- Regional Roadway Safety Program:
 - Equity part of scoring criteria
 - Continue to analyze and report on crash outcomes for our EEAs



Regional Roadway Safety Program



Program Overview

- Established and funded by the TPB via Resolution R3-2021 adopted July 2020
- Modeled after the Transportation Land-Use Connections Program
 - Funds consultant-led technical assistance for planning or preliminary engineering projects focused on roadway safety
- Funded at \$250,000 per fiscal year
- Projects selected through a competitive process
- Three rounds underway



Program Overview

Milestone	FY 2021	FY 2022	FY 2023
Solicit Applications	Jan - Mar 2021	Aug - Oct 2021	Jan - Mar 2022
Selection Panel	May 2021	Nov 2021	Apr - May 2022
TPB Approval	July 2021	Dec 2021	June 2022
Consultant Selection and Task Order Award	Aug - Dec 2021	Jan - Apr 2022	Jul - Sep 2022
Project Kickoff	Jan 2022	May 2022	Oct 2022
Project Complete	Jun 2022	December 2022	June 2023



FY 2021 Projects

Jurisdiction Name	Project	Funding Level
Montgomery County / Prince George's County	MD 650 High Injury Network Safety Study	\$60,000
Prince George's County	Roadway Safety Audits and Design Recommendations for County Maintained High Injury Network	\$40,000
City of Laurel	Bowie Road Safety Audit	\$30,000
Arlington County	School Zone Speed Camera Guidelines	\$60,000
Fairfax County	Herndon Parkway Complete Street Safety Improvements	\$60,000
Total		\$250,000



FY 2022 Projects

Jurisdiction Name	Project	Funding Level
Montgomery County / Prince George's County	MD 650 High Injury Network Safety Study	\$60,000
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Arlington County	School Zone Speed Camera Guidelines	\$60,000
Fairfax County	Herndon Parkway Complete Street Safety Improvements	\$60,000
Total		\$250,000



Future Direction



Future Directions

- Continue RRSP – make the case for additional funding
- Update the safety study analysis to keep up with new data
- Support TPB member jurisdictions in their federal competitive grant applications for safety
- Consider reorienting safety efforts to align with the Safe Systems Approach
- Continue to seek out knowledgeable speakers for safety subcommittee meetings
- **Continue to engage with the Community Advisory Committee – help keep safety on the TPB agenda**



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