Baltimore Regional Transportation Board

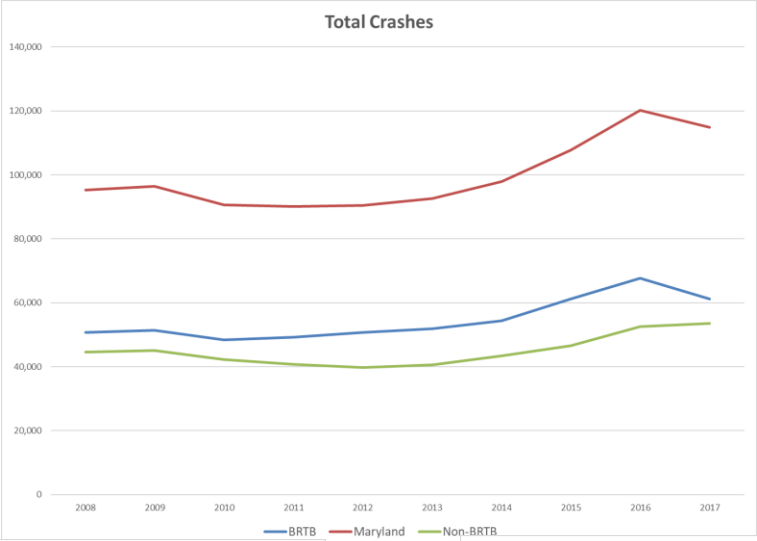
Safety Overview

Target Setting, Local Planning, Safety Projects

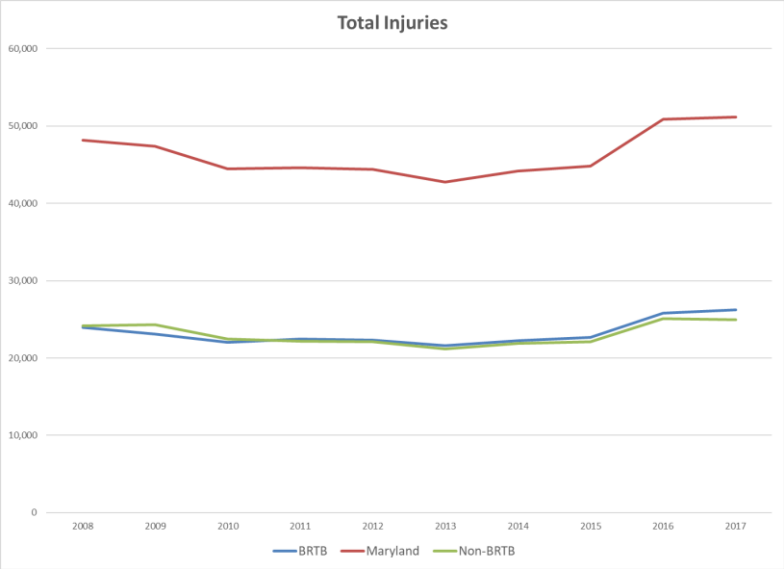
December 4, 2018

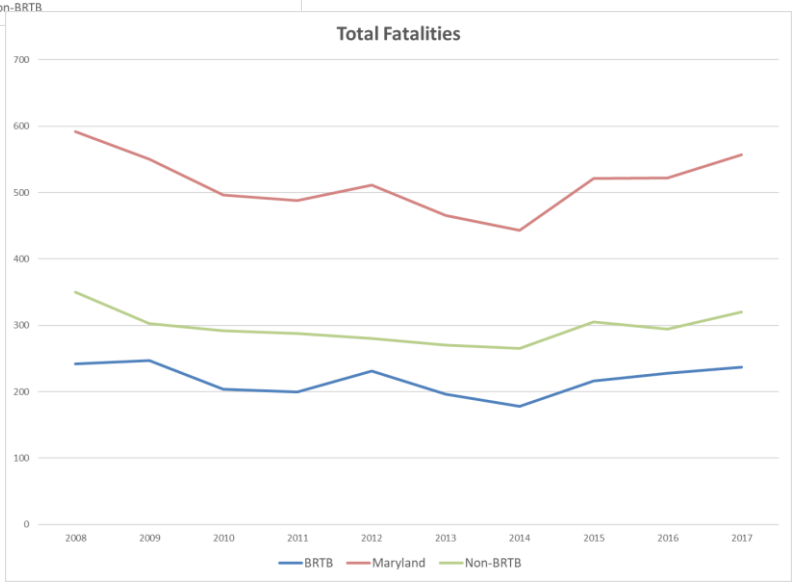
BMC

State of the Baltimore Region



Compared to the rest of the state, region has:
- more crashes
- similar injuries
- fewer fatalities





State of the Region

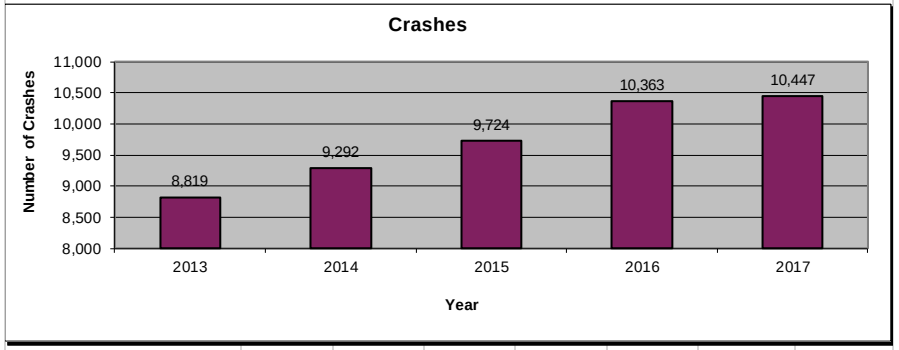
Five Year Average (2013-2017)						
Fatalities and Injuries						
	All	Speed	Distracted	Impaired	Pedestrian	Bicycle
Maryland	47,264	5,658	26,911	3,447	3,165	696
BRTB Region	23,932	2,614	11,779	1,473	1,880	360
Region as % of Statewide	50.6%	46.2%	43.8%	42.7%	**59.4%**	**51.7%**
% of MD		12.0%	56.9%	7.3%	6.7%	1.5%
% of BRTB		10.9%	49.2%	6.2%	**7.9%**	1.5%

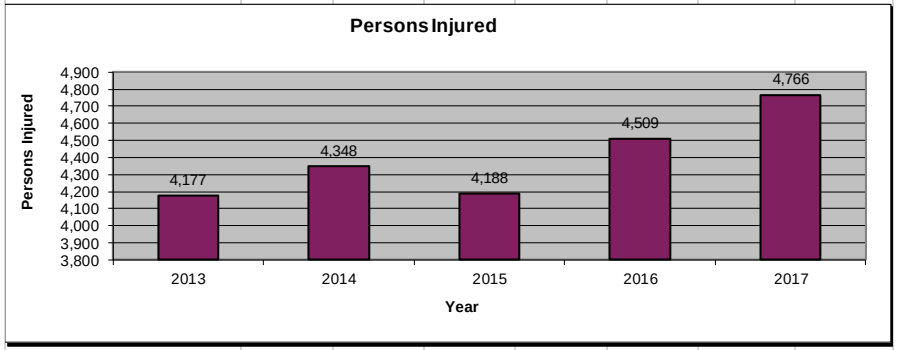
BMC

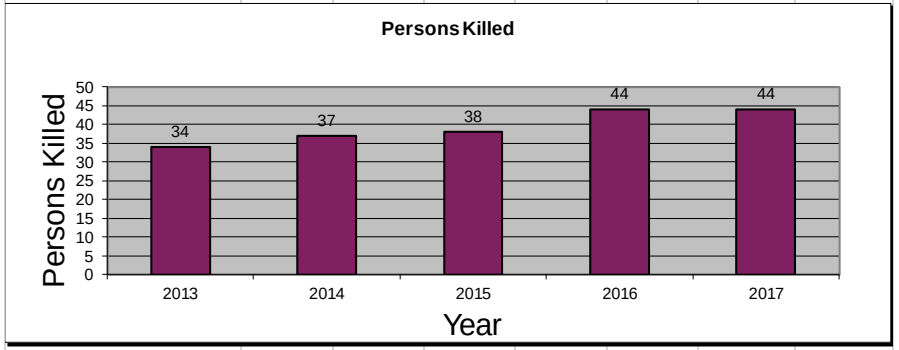
BRTB

Anne Arundel County
Crash Summary

	2013	2014	2015	2016	2017	5 Year AVG.	%
Fatal Crashes	30	35	33	41	41	36	0.4
Injury Crashes	2,943	3,088	3,042	3,238	3,372	3137	32.2
Property Damage Crashes	5,846	6,169	6,649	7,084	7,034	6556	67.4
Total Crashes	8,819	9,292	9,724	10,363	10,447	9729	100.0
Total of All Fatalities	34	37	38	44	44	39	
Total Number Injured	4,177	4,348	4,188	4,509	4,766	4,398	

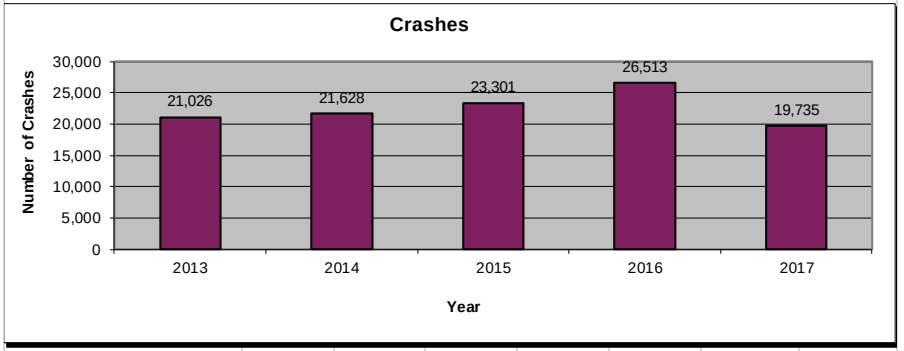


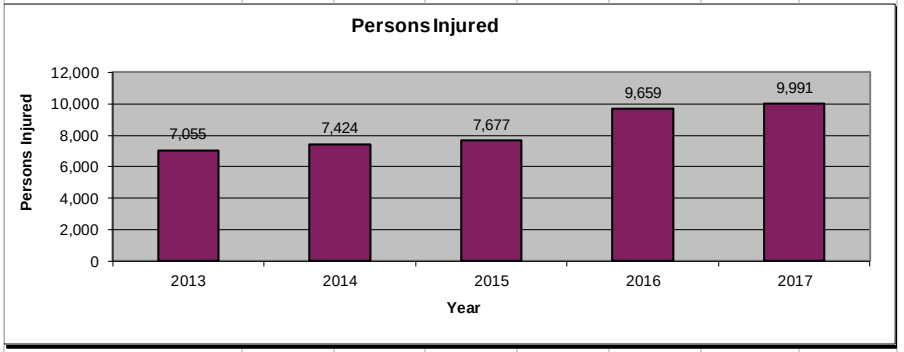


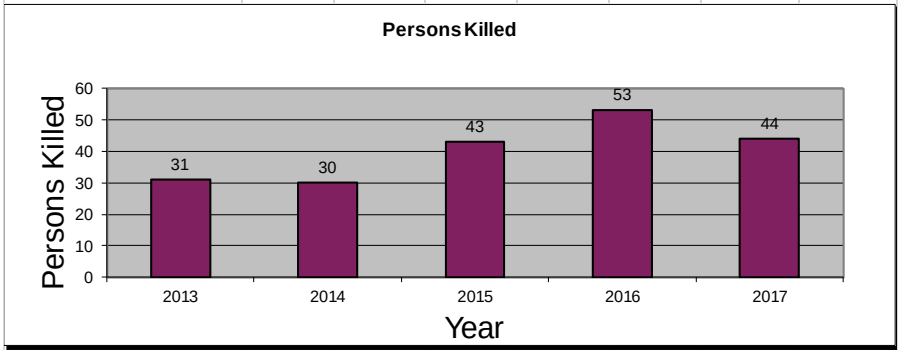


Baltimore City
Crash Summary

	2013	2014	2015	2016	2017	5 Year AVG.	%
Fatal Crashes	27	29	40	46	43	37	0.2
Injury Crashes	4,602	4,715	4,761	5,990	6,018	5217	23.2
Property Damage Crashes	16,397	16,884	18,500	20,477	13,674	17186	76.6
Total Crashes	21,026	21,628	23,301	26,513	19,735	22441	100.0
Total of All Fatalities	31	30	43	53	44	40	
Total Number Injured	7,055	7,424	7,677	9,659	9,991	8,361	

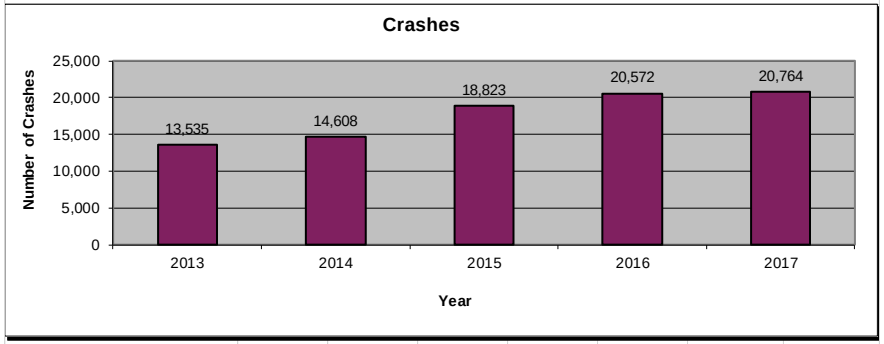


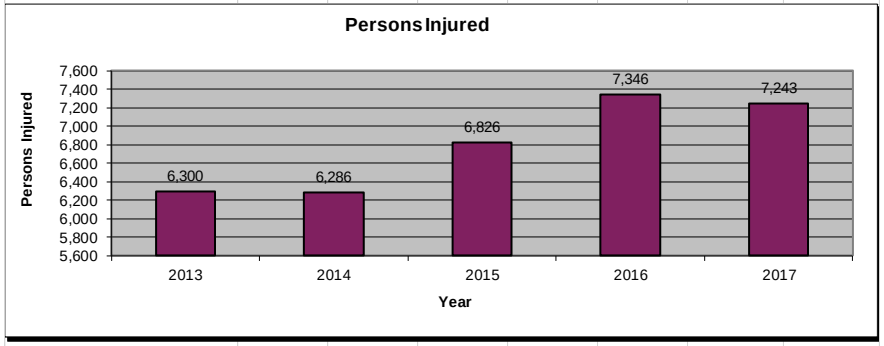


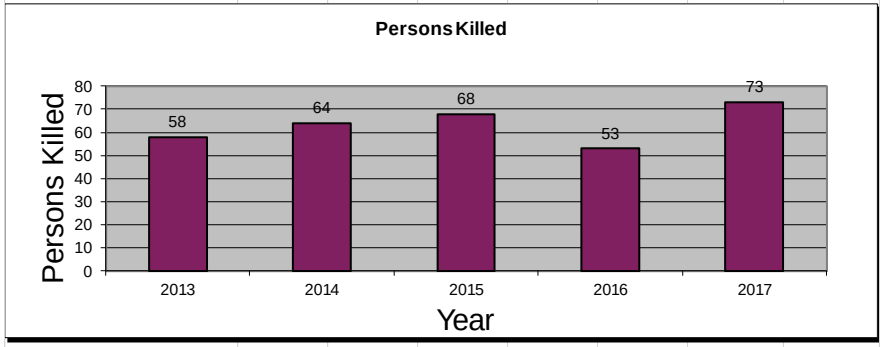


Baltimore County
Crash Summary

	2013	2014	2015	2016	2017	5 Year AVG.	%
Fatal Crashes	55	59	65	53	65	59	0.3
Injury Crashes	4,296	4,470	4,734	5,003	5,032	4707	26.7
Property Damage Crashes	9,184	10,079	14,024	15,516	15,667	12894	73.0
Total Crashes	13,535	14,608	18,823	20,572	20,764	17660	100.0
Total of All Fatalities	58	64	68	53	73	63	
Total Number Injured	6,300	6,286	6,826	7,346	7,243	6,800	

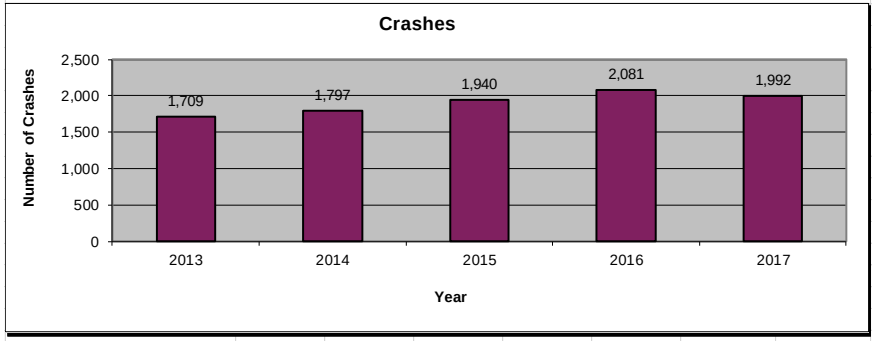


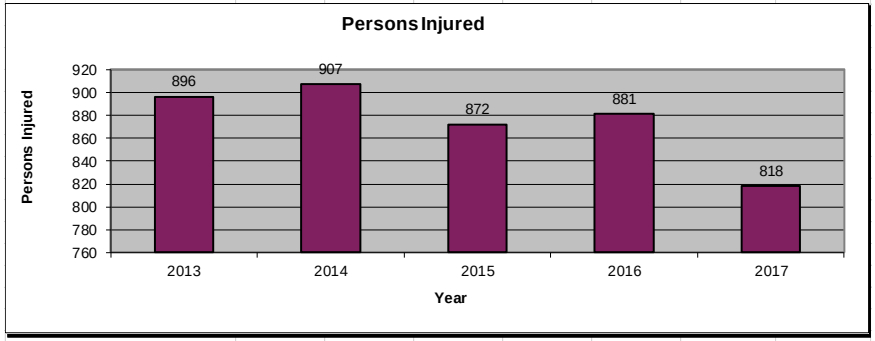


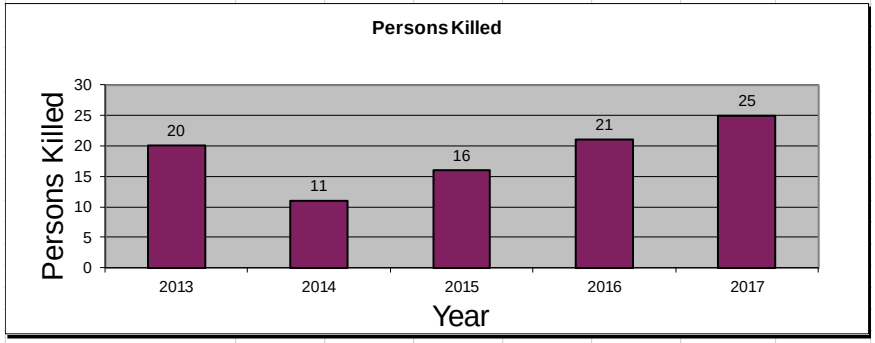


Carroll County
Crash Summary

	2013	2014	2015	2016	2017	5 Year AVG.	%
Fatal Crashes	19	11	16	20	21	17	0.9
Injury Crashes	612	615	589	631	569	603	31.7
Property Damage Crashes	1,078	1,171	1,335	1,430	1,402	1283	67.4
Total Crashes	1,709	1,797	1,940	2,081	1,992	1904	100.0
Total of All Fatalities	20	11	16	21	25	19	
Total Number Injured	896	907	872	881	818	875	

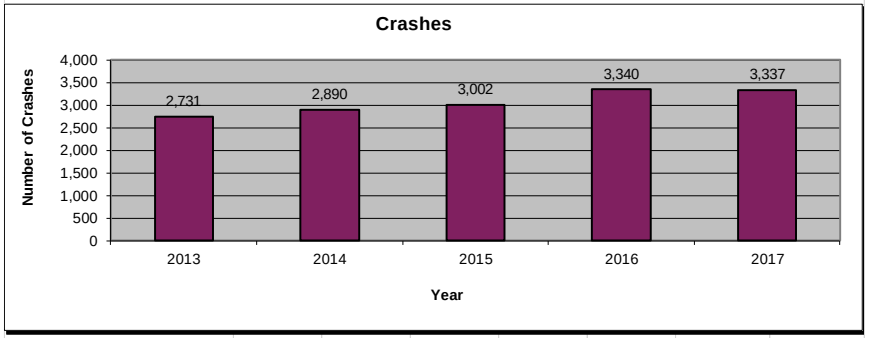


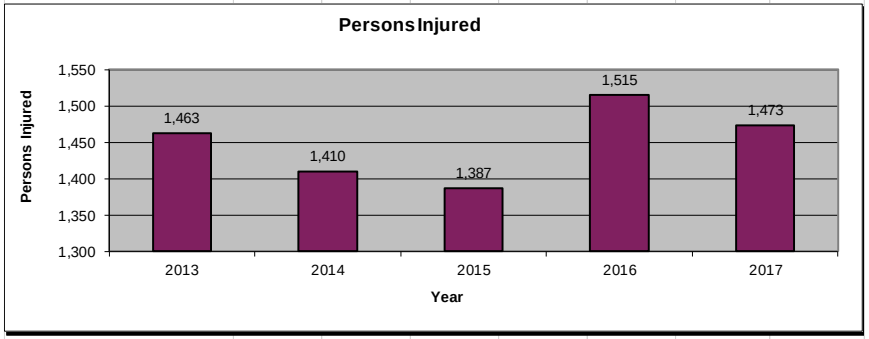


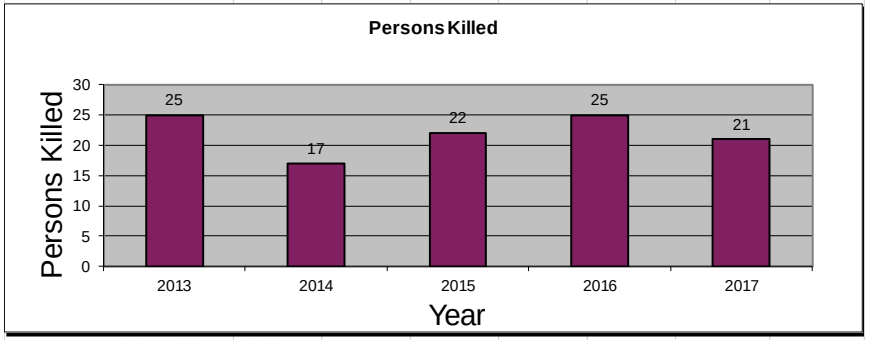


Harford County
Crash Summary

	2013	2014	2015	2016	2017	5 Year AVG.	%
Fatal Crashes	25	17	22	23	21	22	0.7
Injury Crashes	1,013	990	920	1,050	1,026	1000	32.7
Property Damage Crashes	1,693	1,883	2,060	2,267	2,290	2039	66.6
Total Crashes	2,731	2,890	3,002	3,340	3,337	3060	100.0
Total of All Fatalities	25	17	22	25	21	22	
Total Number Injured	1,463	1,410	1,387	1,515	1,473	1,450	

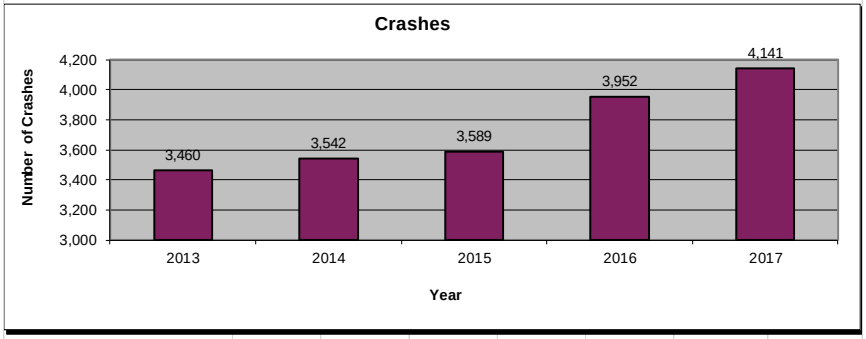


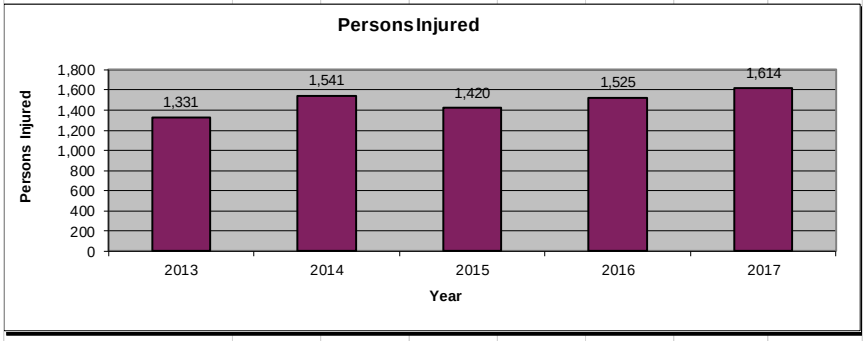


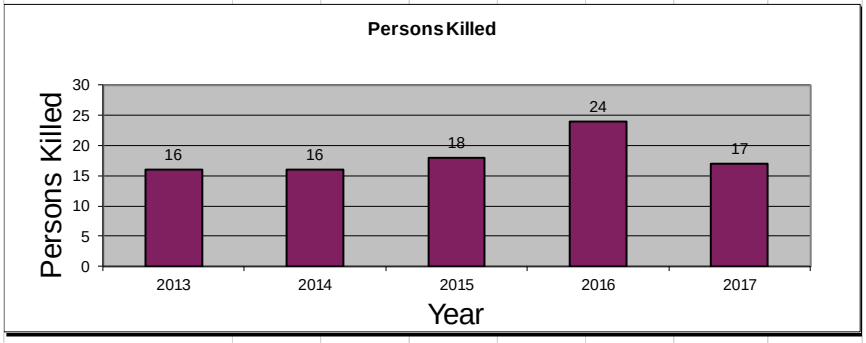


Howard County
Crash Summary

	2013	2014	2015	2016	2017	5 Year AVG.	%
Fatal Crashes	15	16	18	21	17	17	0.5
Injury Crashes	995	1,093	1,041	1,098	1,181	1082	28.9
Property Damage Crashes	2,450	2,433	2,530	2,833	2,943	2638	70.6
Total Crashes	3,460	3,542	3,589	3,952	4,141	3737	100.0
Total of All Fatalities	16	16	18	24	17	18	
Total Number Injured	1,331	1,541	1,420	1,525	1,614	1,486	

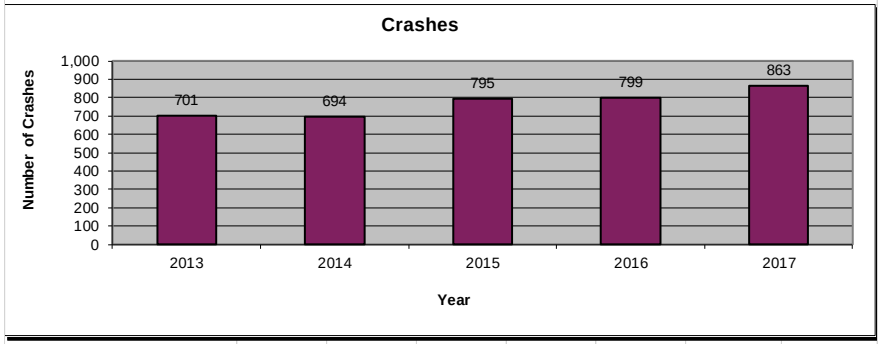


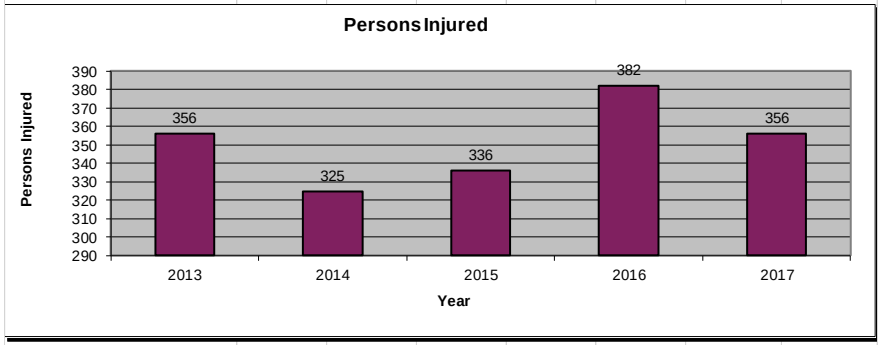


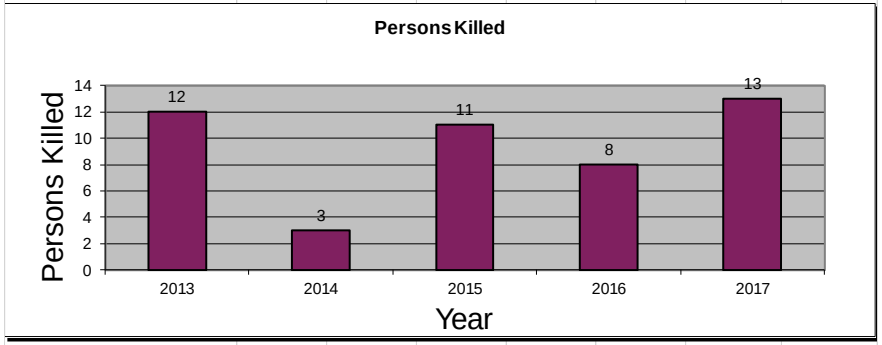


Queen Anne's County
Crash Summary

	2013	2014	2015	2016	2017	5 Year AVG.	%
Fatal Crashes	9	3	6	6	13	7	1.0
Injury Crashes	221	225	222	259	242	234	30.3
Property Damage Crashes	471	466	567	534	608	529	68.7
Total Crashes	701	694	795	799	863	770	100.0
Total of All Fatalities	12	3	11	8	13	9	
Total Number Injured	356	325	336	382	356	351	

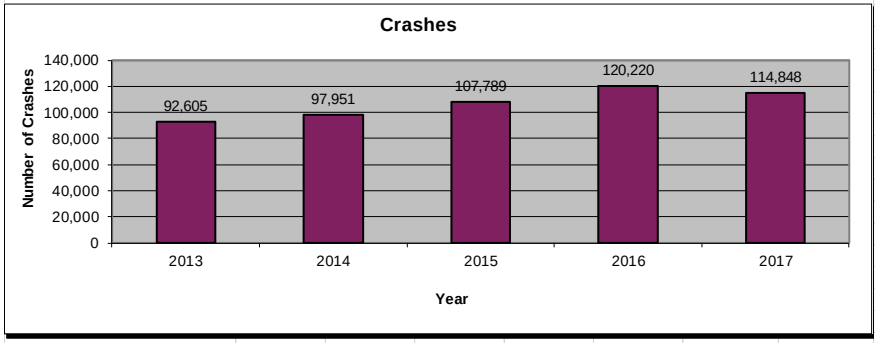


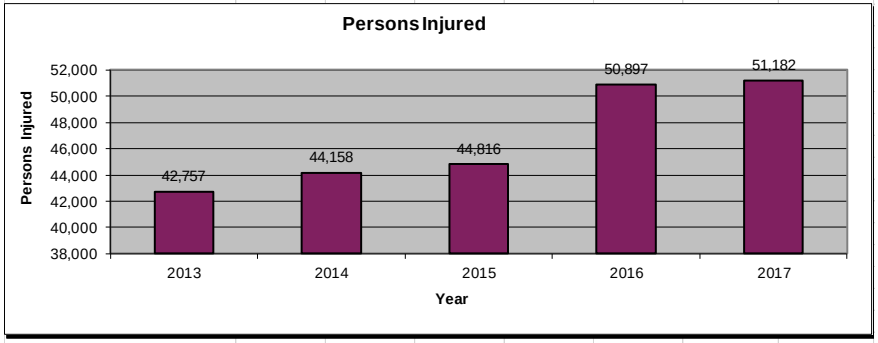


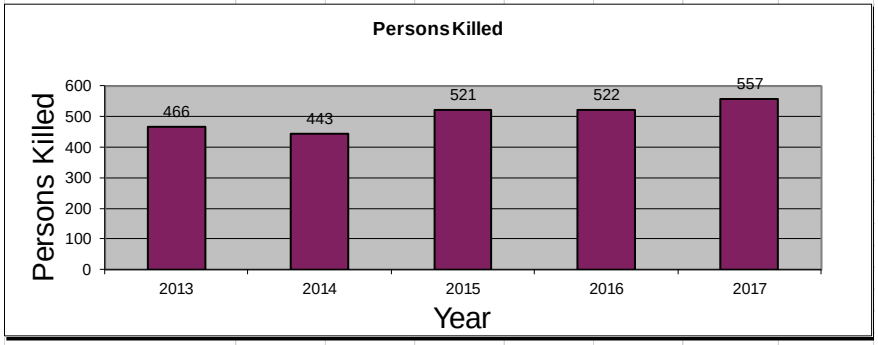


Statewide
Crash Summary

	2013	2014	2015	2016	2017	5 Year AVG.	%
Fatal Crashes	432	417	480	483	517	466	0.4
Injury Crashes	29,236	30,369	30,655	34,705	34,518	31897	29.9
Property Damage Crashes	62,937	67,165	76,654	85,032	79,813	74320	69.7
Total Crashes	92,605	97,951	107,789	120,220	114,848	106683	100.0
Total of All Fatalities	466	443	521	522	557	502	
Total Number Injured	42,757	44,158	44,816	50,897	51,182	46,762	







Safety Performance Measures

- **Federal regulations state MPOs must set safety performance targets 180 days after the State HSIP Report is submitted**

- **Five targets:**
  - Total fatalities - Fatality rate per 100 MVMT
  - Total serious injuries - Serious injury rate per 100 MVMT
  - Total fatalities and serious injuries among non-motorized persons

Resolution 18-8

Baltimore Region Yearly Highway Safety Targets

Performance Measure	2016	2017	2018	2019	2020
Number of Fatalities	188	182	176	171	166
Number of Serious Injuries	1,224	1,200	1,176	1,153	1,130
Fatality Rate per 100 Million VMT	0.72	0.70	0.68	0.66	0.64
Serious Injury Rate per 100 Million VMT	4.46	4.31	4.18	4.05	3.92
Number of Non-motorized Fatalities & Serious Injuries	216	209	202	195	188

Resolution 19-xx

Baltimore Region Yearly Highway Safety Targets

Performance Measure	2017	2018	2019	2020	2021
Number of Fatalities	184	178	173	168	163
Number of Serious Injuries	1,211	1,187	1,163	1,140	1,118
Fatality Rate per 100 Million VMT	0.70	0.68	0.66	0.64	0.62
Serious Injury Rate per 100 Million VMT	4.36	4.22	4.09	3.96	3.84
Number of Non-motorized Fatalities & Serious Injuries	217	209	202	195	188

Maryland SHSP Process

- **Current plan 2016-2020 (Update work begins in 2019)**

- **Toward Zero Deaths methodology**
  - Reduce by 50% from 2008 → 2030
  - Five-year rolling averages – adjusted with each new year of data
  - Single year targets are midpoint of average (e.g. 2017 = 2015-2019)

- **Six Emphasis Area Teams**
  - Aggressive
  - Impaired
  - Occupant protection
  - Distracted
  - Infrastructure-related
  - Pedestrian/Bicycle

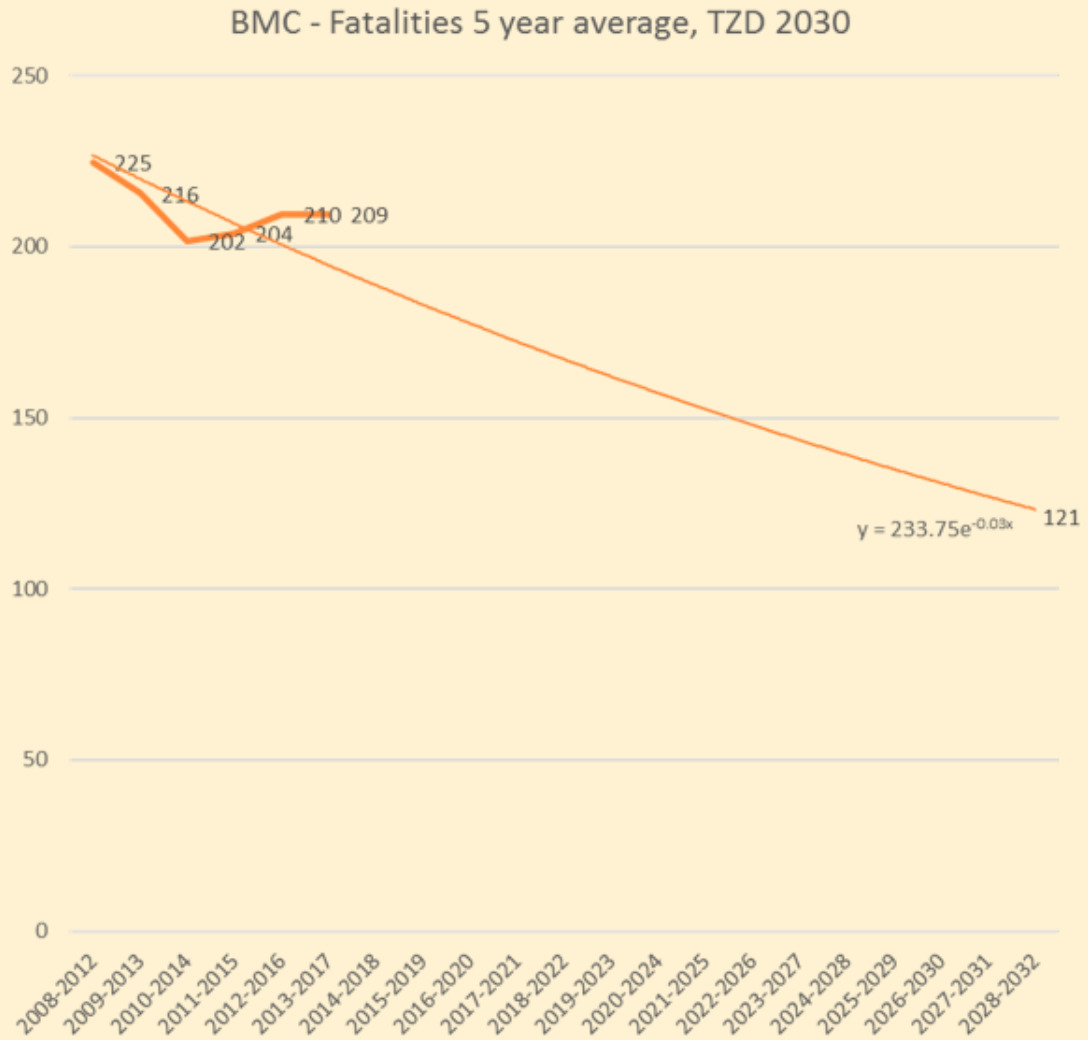
BRTB Target-Setting Process

- **Follow Maryland's methodology - Toward Zero Deaths**
  - Reduce by 50% from 2008 → 2030
- **Set five targets specific to the BRTB Region**
- **Updated targets to be approved no later than February 26, 2019**
  - Incorporate new year of data into five –year rolling averages
  - Adjust exponential trend line with same fixed end point
  - Single year targets are the midpoint of the average
    - (e.g. 2017 = 2015-2019)

Proposed Targets – Fatalities

Targets:

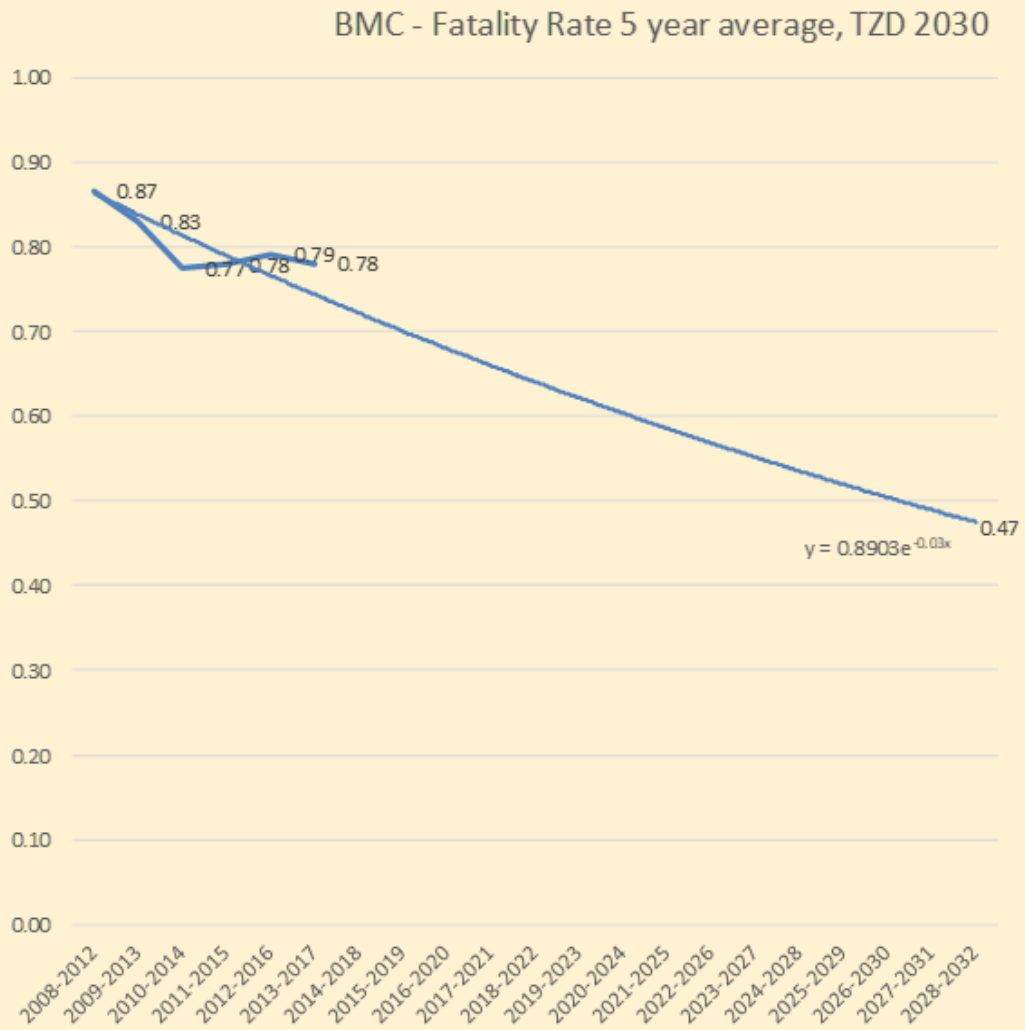
2017 – 184
2018 – 178
2019 – 173
2020 – 168
2021 – 163



Proposed Targets – Fatality Rate

Targets:

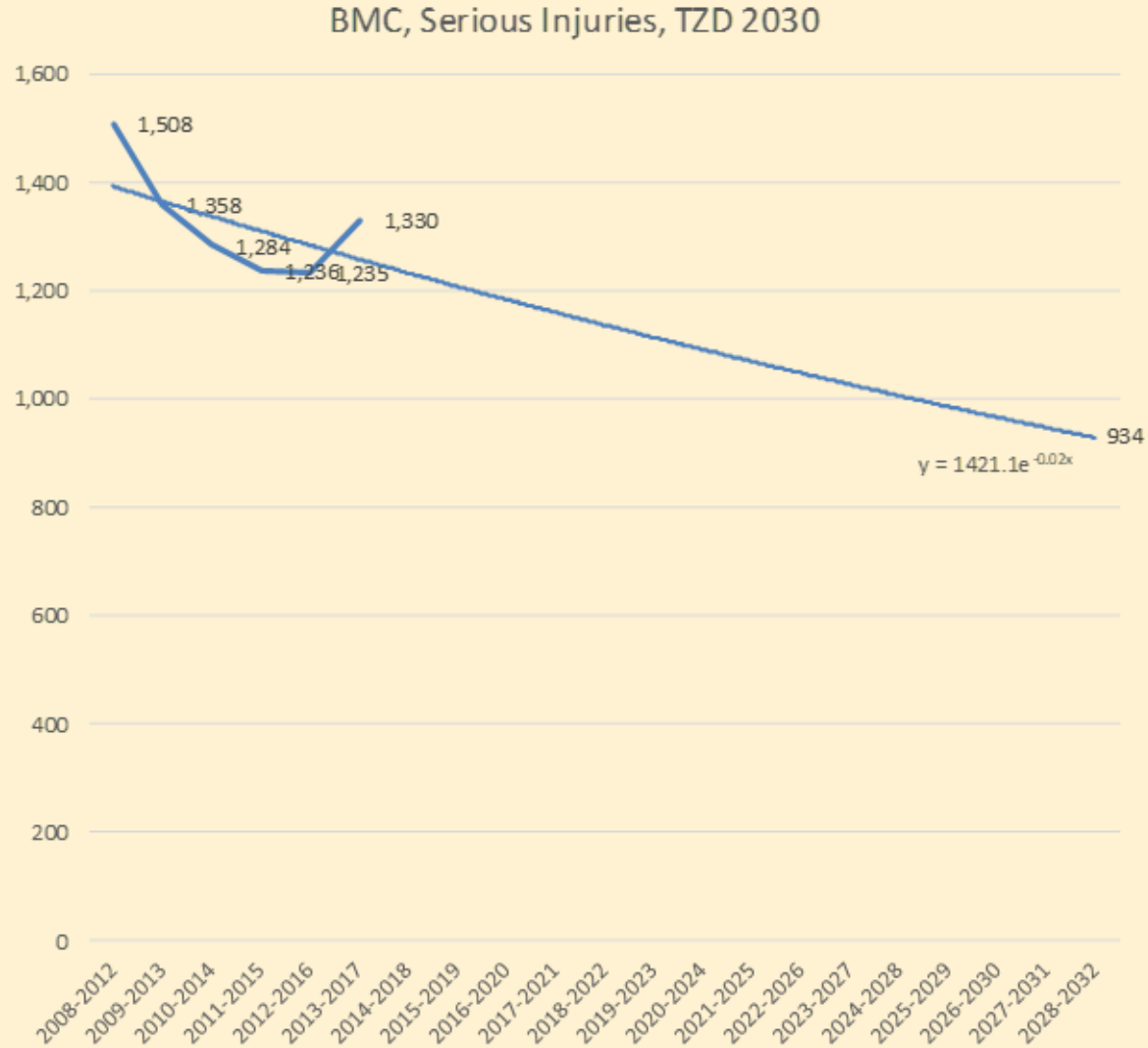
2017 – 0.70
2018 – 0.68
2019 – 0.66
2020 – 0.64
2021 – 0.62



Proposed Targets – Serious Injuries

Targets:

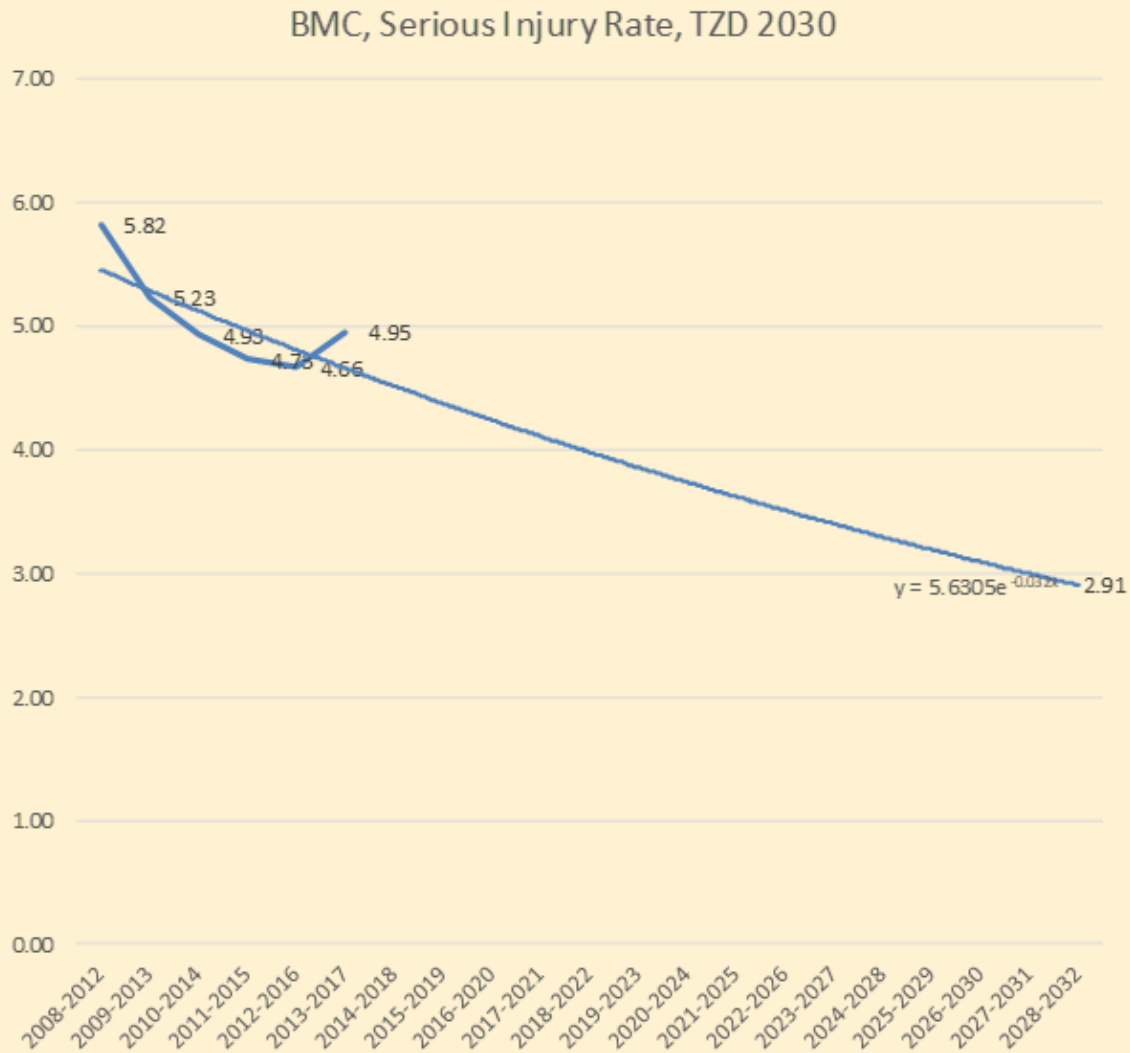
2017 – 1,211
2018 – 1,187
2019 – 1,163
2020 – 1,140
2021 – 1,118



Proposed Targets – Serious Injury Rate

Targets:

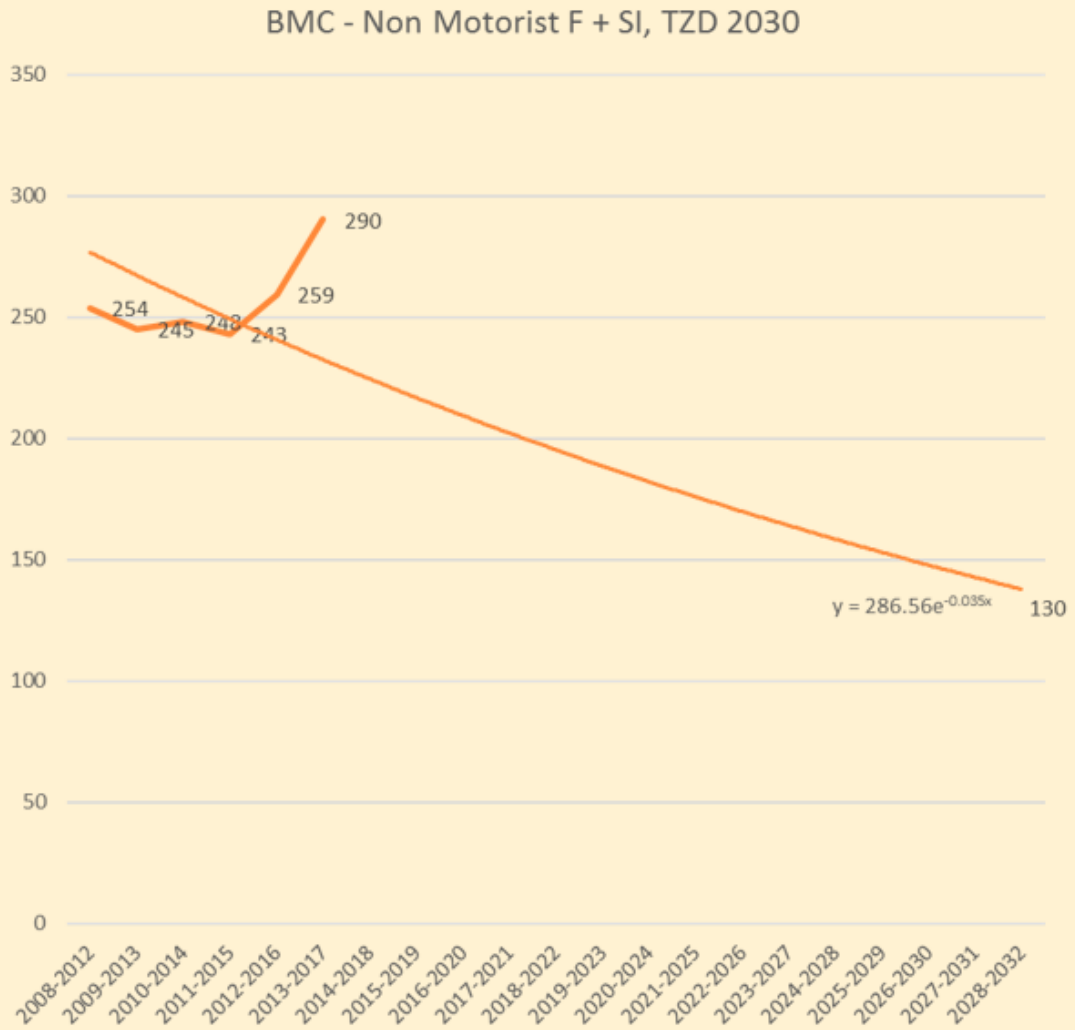
2017 – 4.36
2018 – 4.22
2019 – 4.09
2020 – 3.96
2021 – 3.84



Proposed Targets – Non-motorized Fatalities and Serious Injuries

Targets:

2017 – 217
2018 – 209
2019 – 202
2020 – 195
2021 – 188



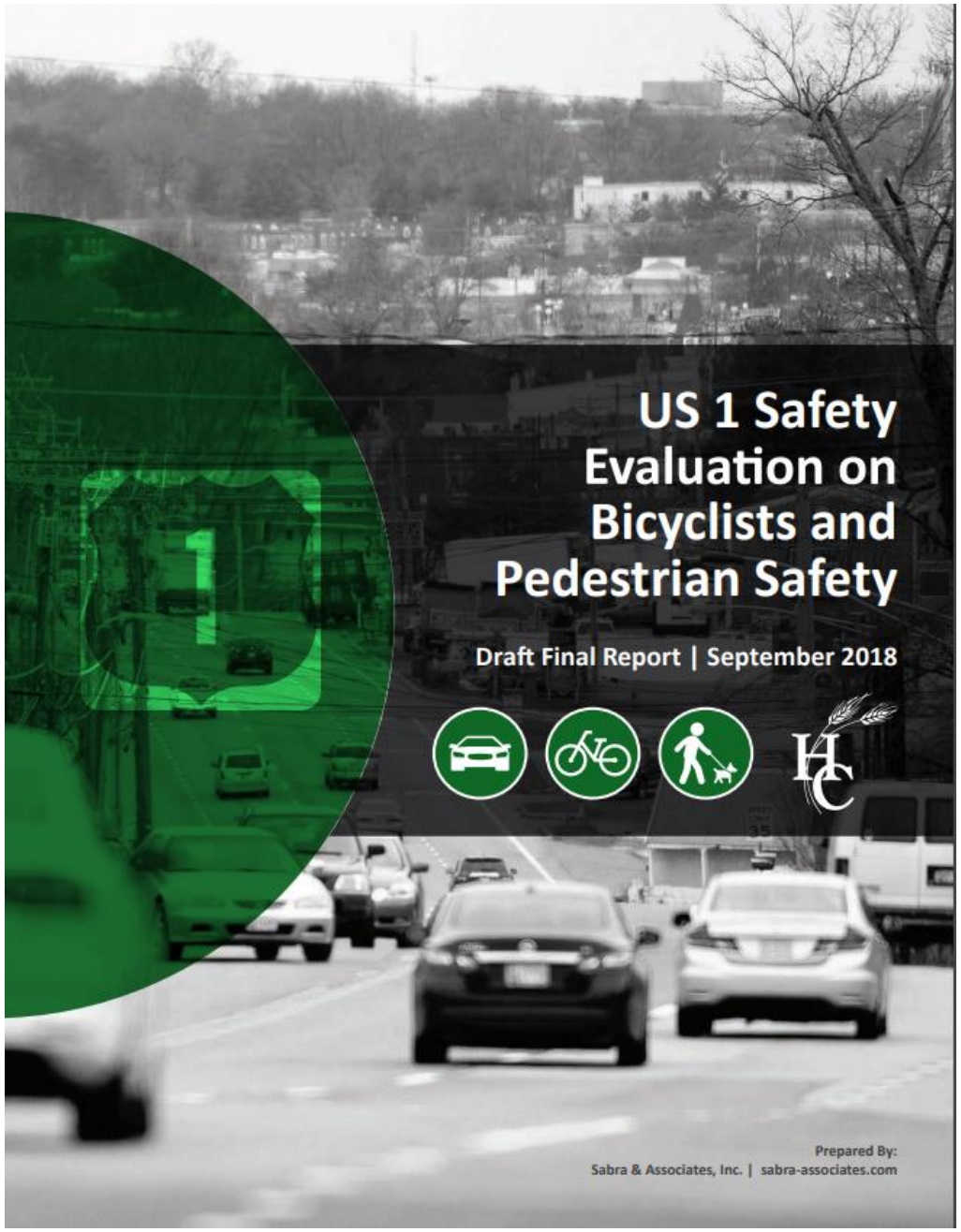
BRTB Summary

- **Overall declines in fatality and serious injury averages from 2004-2008 → 2013-2017 averages**

- **Recent increase in fatalities and serious injuries**
  - Slow to move the five-year rolling average trend
  - Different than State trend with serious injuries

- **Significant increase in the number of Non-motorized Fatalities and Serious Injuries**
  - Current average is higher than 2004-2008 (different than State)

Current efforts – US 1 Safety Evaluation



Current efforts – Development of New Creative for Baltimore Region

BALTIMORE METROPOLITAN COUNCIL

REQUEST FOR PROPOSALS

Project: 19M301B2
Pedestrian and Bicycle Safety - Public Education and Outreach Campaign

Issue Date:
Friday, August 31, 2018

Current efforts - Local SHSP Development

- **Aim to develop plans in all seven BRTB Jurisdictions**
  - Several plans in place already
    - SHSP
    - Other planning documents

- **Current status**
  - One with an existing plan: developing Action Steps, Implementation Plans, and Evaluation Systems
  - Two with teams in place: having kick-off meetings and conducting data analysis for problem identification
  - Four starting fresh: coordinating local partners to formalize the local SHSP core teams

For More Information

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Current Status – Fatalities

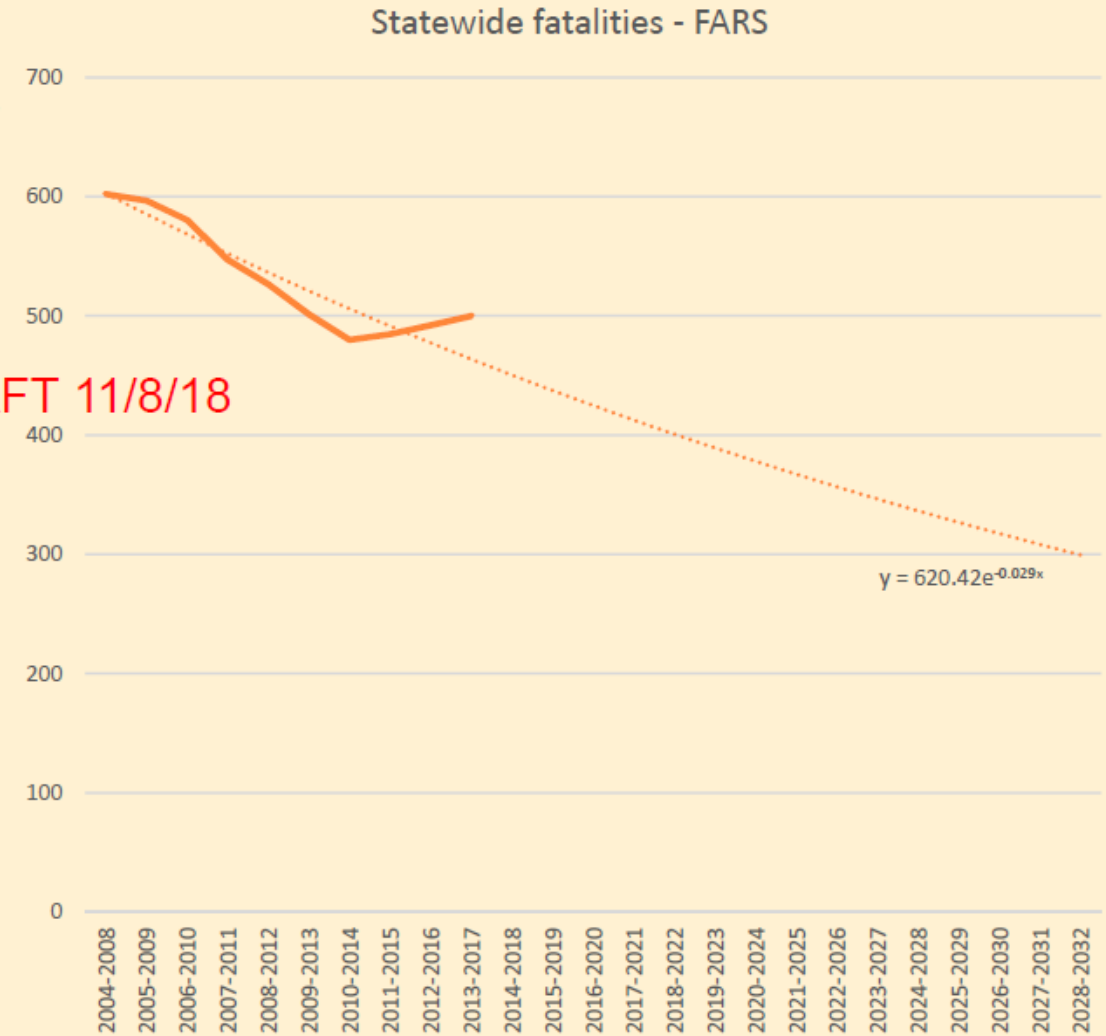
Toward Zero Deaths (TZD)

- **Fixed end point (half of 2008 numbers by 2030)**
- **Exponential trend line fitted**

DRAFT 11/8/18

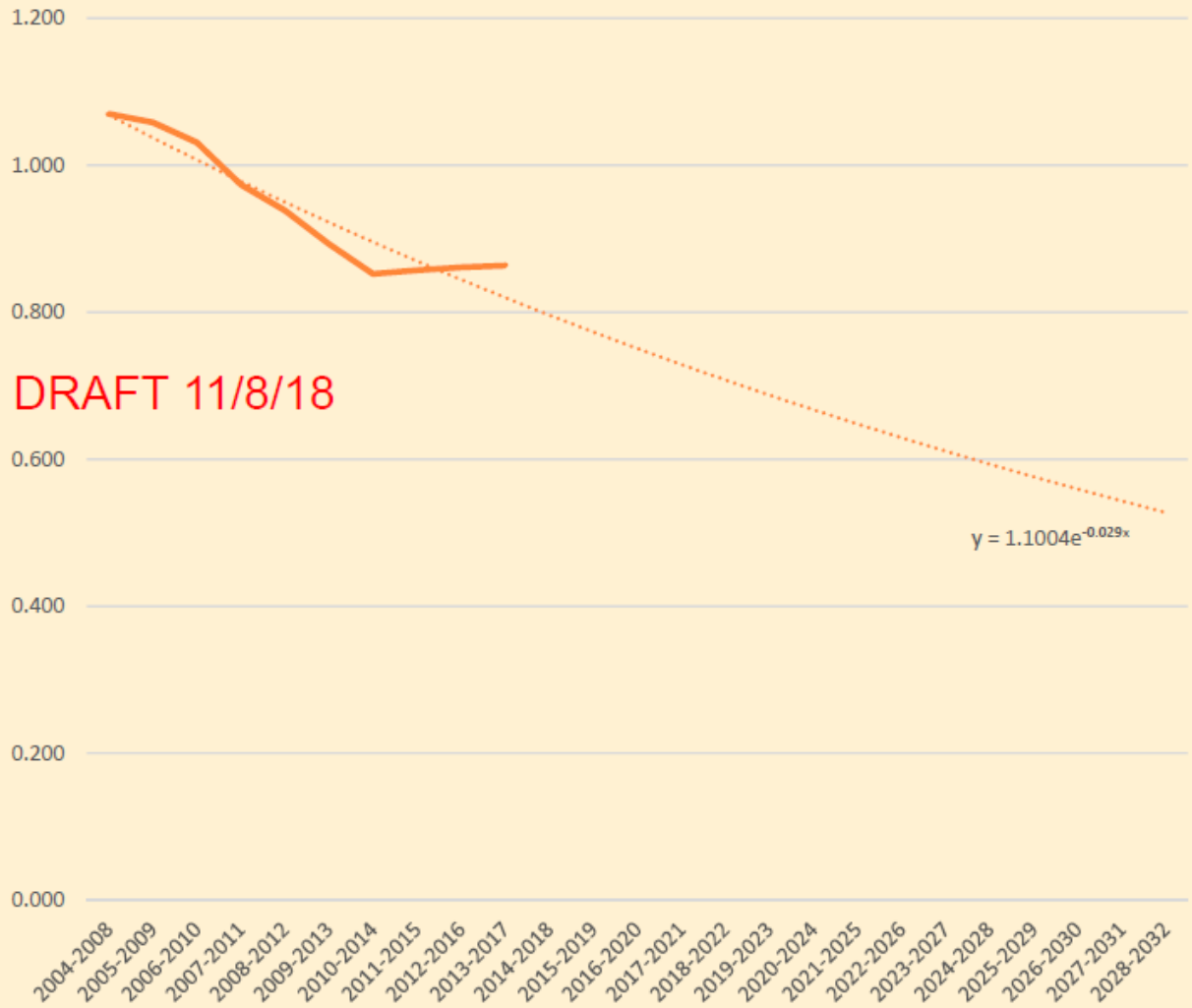
Targets

2014-2018	451.0
2015-2019	438.1
2016-2020	425.6
2017-2021	413.4
2018-2022	401.6



Current Status – Fatality Rate

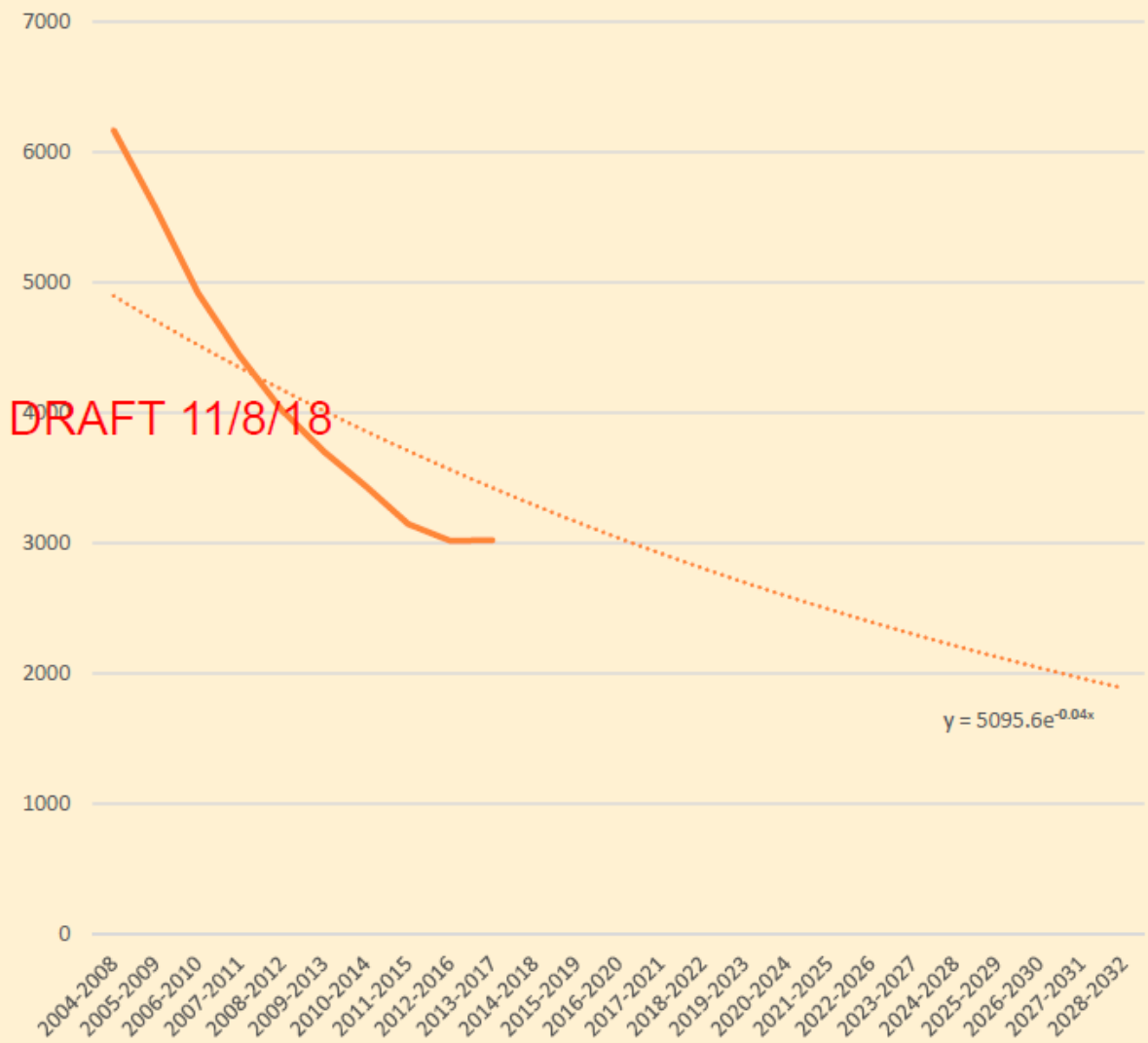
Targets	
2014-2018	0.800
2015-2019	0.777
2016-2020	0.755
2017-2021	0.733
2018-2022	0.712



Current Status – Serious Injuries

Targets

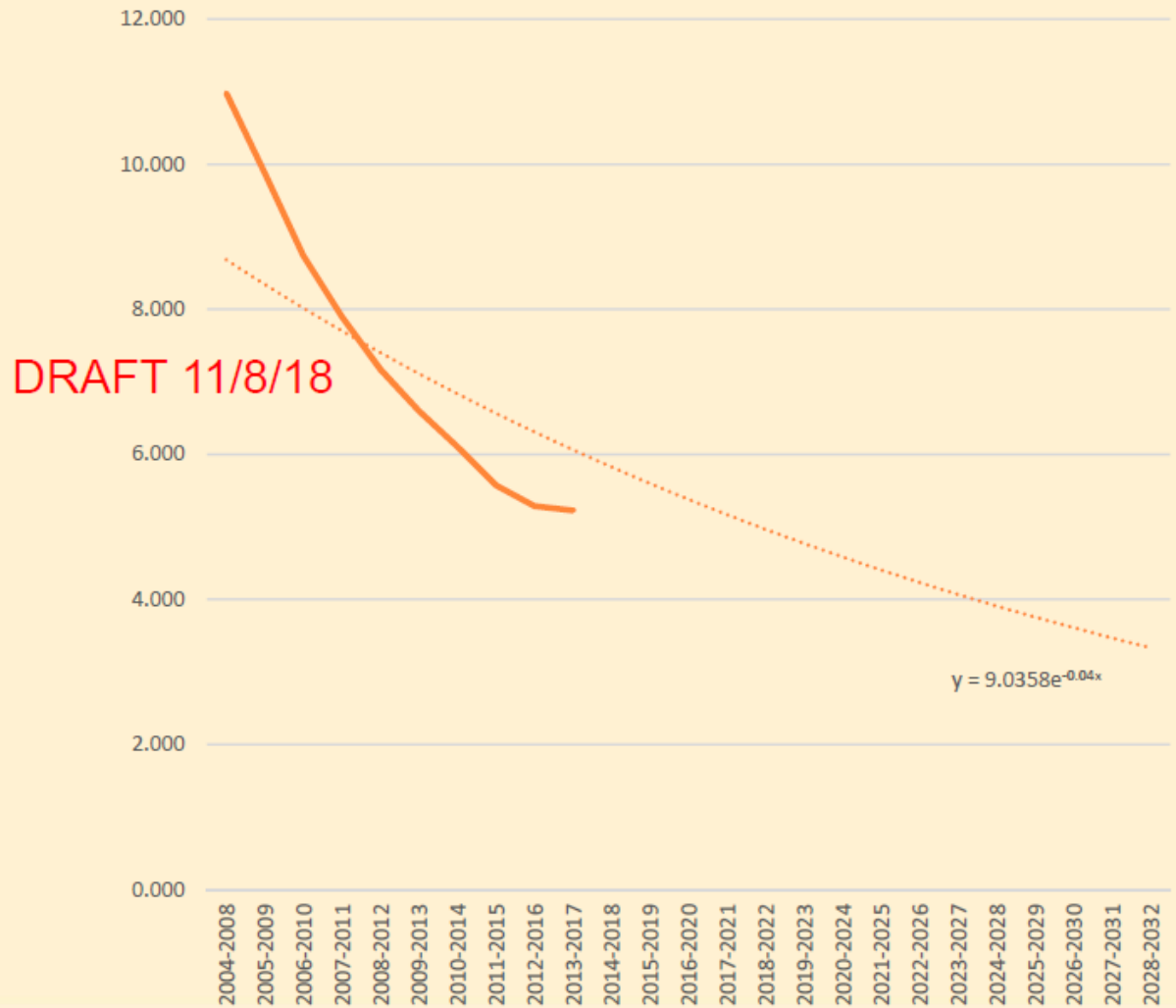
2014-2018	3,281.8
2015-2019	3,153.1
2016-2020	3,029.4
2017-2021	2,910.7
2018-2022	2,796.5



Current Status – Serious Injury Rate

Targets

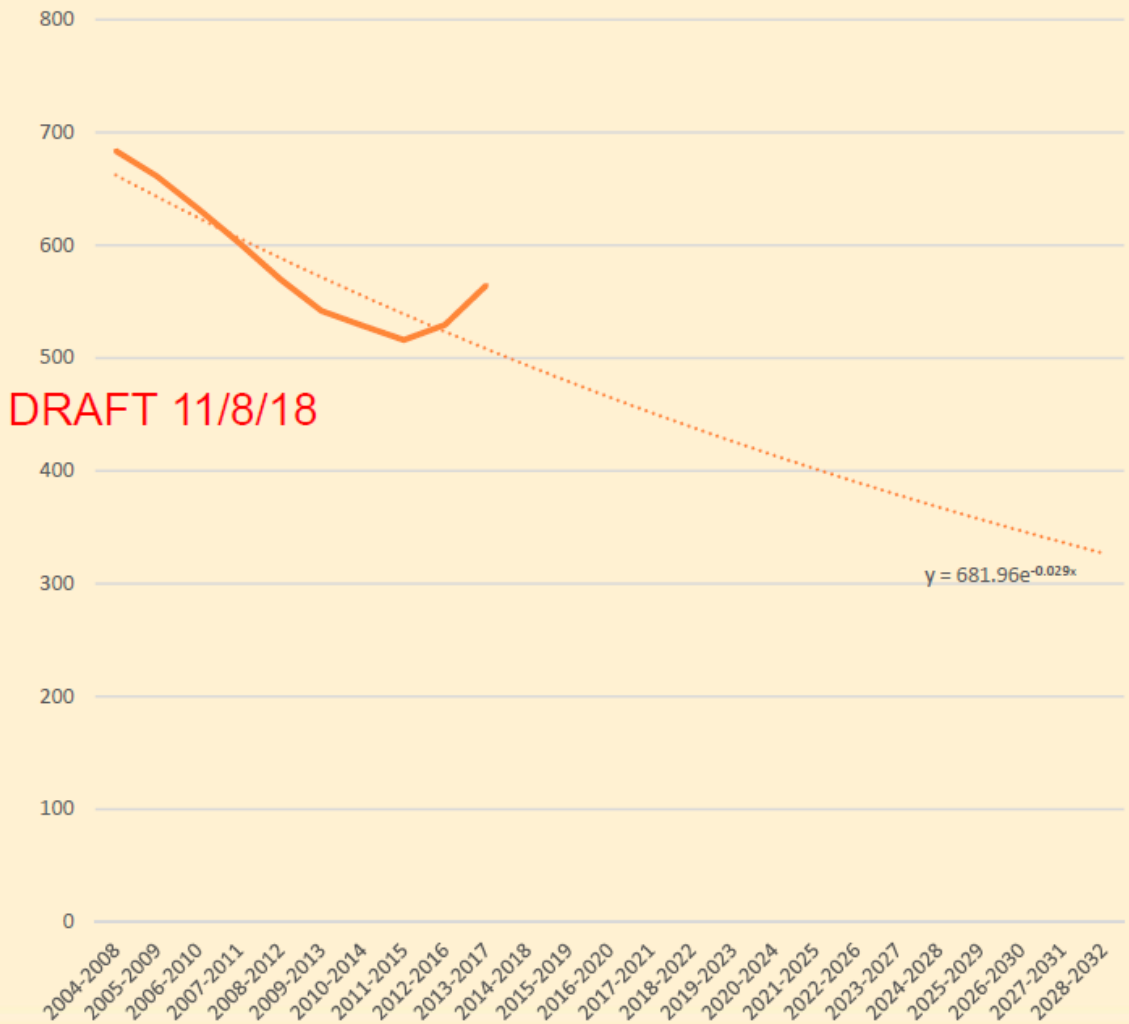
2014-2018	5.819
2015-2019	5.591
2016-2020	5.372
2017-2021	5.161
2018-2022	4.959



Current Status – Non-motorized Fatalities and Serious Injuries

Targets

2014-2018	495.7
2015-2019	481.5
2016-2020	467.8
2017-2021	454.4
2018-2022	441.4



Summary

- **Overall declines in all measures from 2004-2008 → 2013-2017 averages**
- **Significant declines in serious injury metrics**
  - Potentially related to reporting definition
- **Recent increase in fatalities**
  - Slow to move the five-year rolling average trend
- **Significant increase in the number of Non-motorized Fatalities and Serious Injuries**
  - Pedestrians
  - Bicyclists
  - Those standing outside of a vehicle