



COMMONWEALTH of VIRGINIA
Office of the
SECRETARY of TRANSPORTATION

Transportation Safety Performance 2025 Safety Measures

June 17, 2024



Federal Safety Target Setting

- Provide background on target setting requirements
- Provide statewide trends of safety performance data
- Potential federal target setting approaches and recommended approach
- Results from each approach
- Proposed 2025 federal safety targets
- Next Steps

Background

Safety Performance Management Requirements

- Code of Virginia § 2.2-229 – CTB to establish performance targets for surface transportation
- Federal law requires performance targets for Safety (5 measures)
- Safety targets must be set annually for the next calendar year
- VDOT and Department of Motor Vehicles' (DMV) Highway Safety Office (HSO) coordinate on 3 of the 5 performance measures
 - DMV must report targets to NHTSA by August 1
 - VDOT must report targets to FHWA by August 31

NHTSA - National Highway Traffic Safety Administration
FHWA - Federal Highway Administration

Background

Safety Performance Management Federal Measures

- **Number of fatalities*** - person involved died at scene or within 30 days
- **Rate of fatalities*** - per 100M vehicle miles traveled
- **Number of serious injuries*** - suspected serious injury, typically taken to hospital
- **Rate of serious injuries** - per 100M vehicles miles traveled
- **Number of non-motorized fatalities and serious injuries** - bicyclists and pedestrians

* Three federal measures requiring coordination and consistency with the DMV HSO

Background

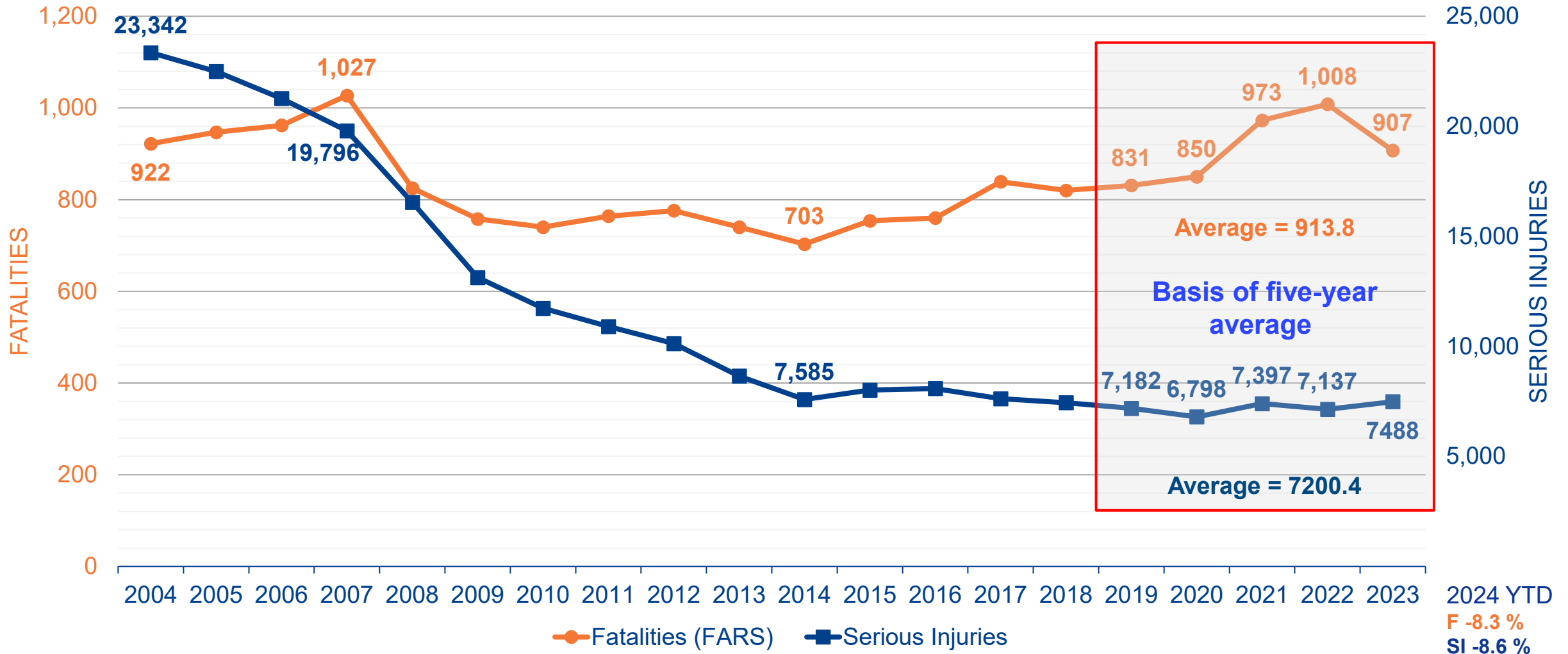
New Federal Target Setting Requirements

- The 2021 BIL (IIJA) requires that States set safety targets that demonstrate level or improved performance for the three common measures (Fatalities, Fatality Rate, and Serious Injuries).
 - USDOT has ruled that the submitted 2025 five-year averages of annual targets must be level or improved based on the most recent five-year average (2019 - 2023).
- Annual federal reporting for DMV and VDOT requires submission of annual and the calculated five-year average targets.
- The CTB must now adopt annual safety performance values for 2025 that support level or improved five-year average targets.

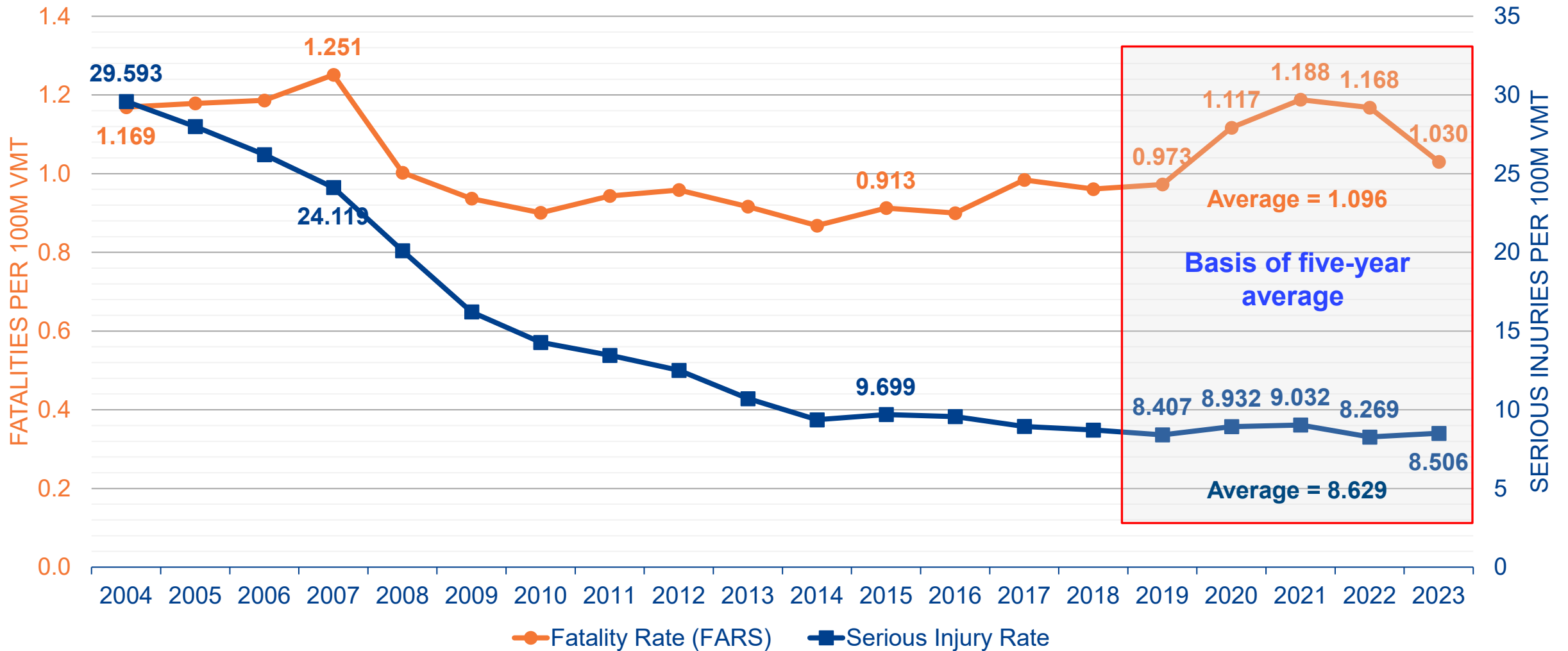
BIL – Bipartisan Infrastructure Law

IIJA – Infrastructure Investment and Jobs Act

Statewide Trends of Annual Fatalities and Serious Injuries



Statewide Trends of Annual Fatality and Serious Injury Rates



Potential 2025 Federal Target Setting Approaches

- The following approaches were explored to determine which method resulted in level or improved performance:
 1. High- and low-range predictions from the analytical model used for previous targets; and
 2. Calculated values necessary to provide level five-year averages.
- More information is provided for both approaches on the following slides.

Potential Approaches

Approach 1: Analytical Model Prediction

- Calculate the predicted year fatalities and serious injuries counts using an analytical model that considers external influencing factors and has been adjusted annually.
 - Separate high- and low-range predictions are developed based on different trends for factors.
 - External influencing factors include vehicle miles traveled, demographics and employment, weather, liquor sales, VDOT construction, maintenance and operations programs spending, DMV behavioral programs spending, and annual calibration.
- Determine the expected annual reductions of SMART SCALE and VHSIP projects that were recently or soon to be completed and subtract from the model predictions.

Model Prediction – Project Safety Benefits = Expected Performance

- Calculate the two “rate” measures based on the expected performance for “count” measures and the projected VMT growth.

Potential Approaches

Approach 2: Level Five-Year Average Projections

- Determine the annual “count measure” values for 2024 and 2025 that will result in a 2025 five-year average equaling the baseline 2023 five-year average.
- Calculate the two “rate” measures based on the calculated performance for the “count” measures and the projected VMT growth.

Potential Approaches

Recommended Approach

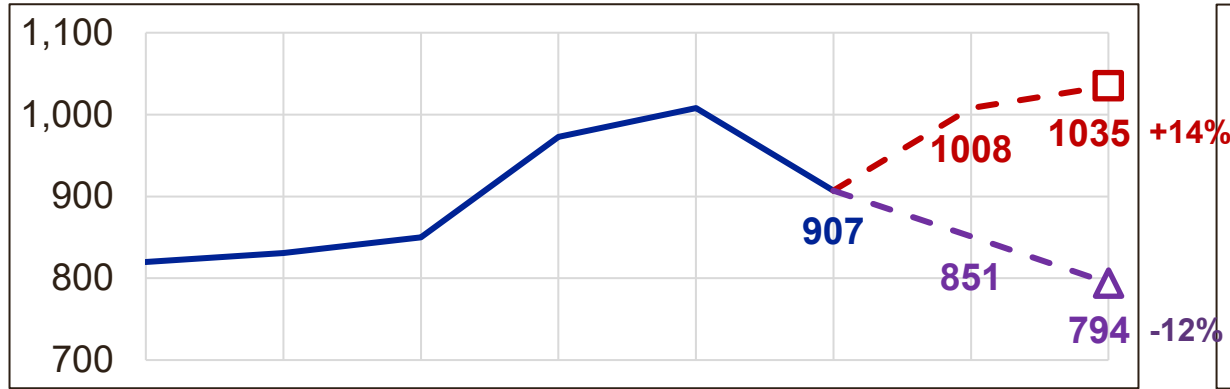
The following is the logic to establish the 2025 safety performance values that meets the federal requirement that the submitted 2025 five-year averages must be level or improved based on the most recent five-year average (2019 - 2023).

1. Use the model output if the results meet the requirement of level or declining five-year averages and are reasonable, otherwise;
2. Use the calculated level five-year average.

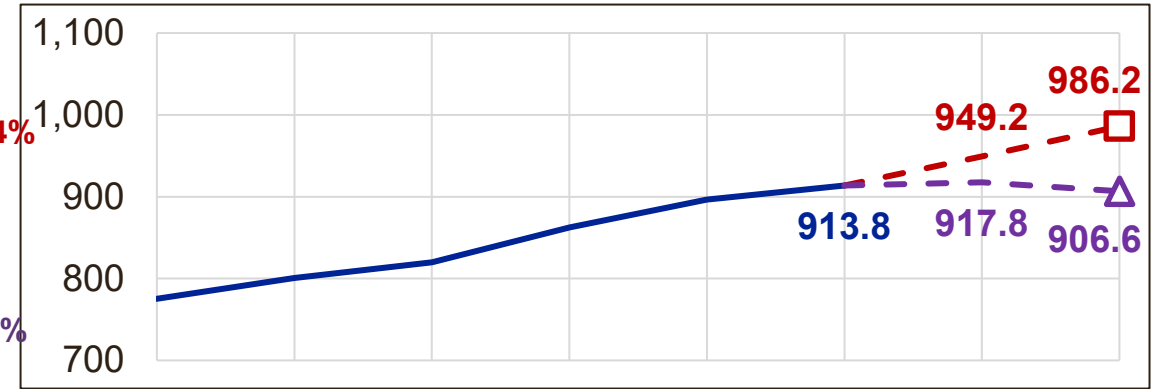
Results - Fatalities

- Historic Data
 - - □ - - High Prediction
 - - △ - - Low Prediction
 - - ◇ - - Level 5-Year Target
- ✓ Recommended Approach

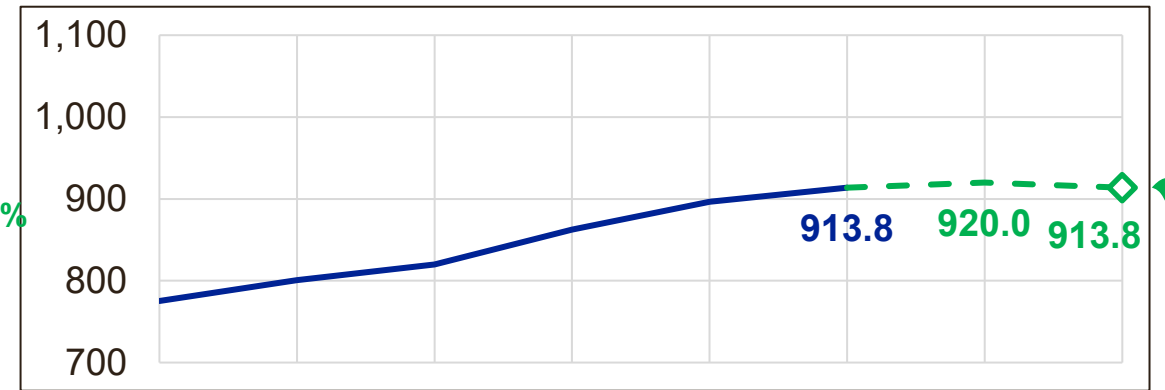
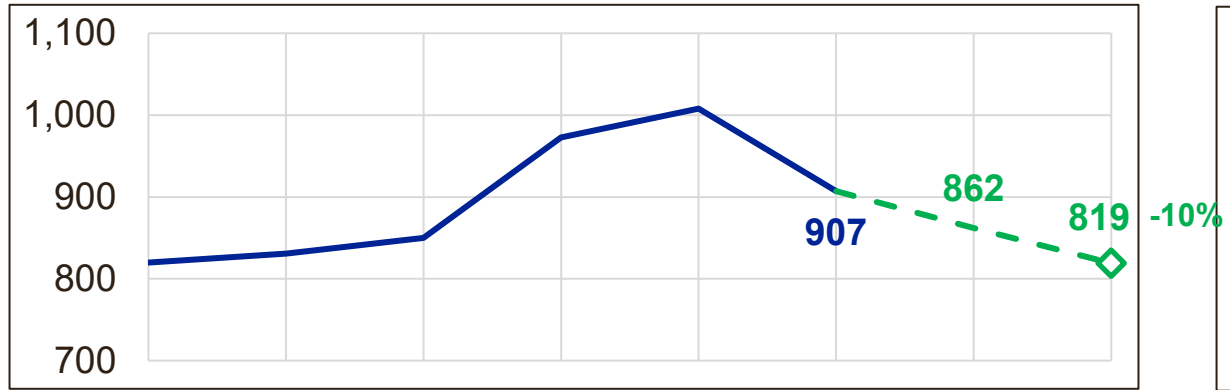
Annual



Five-Year Averages



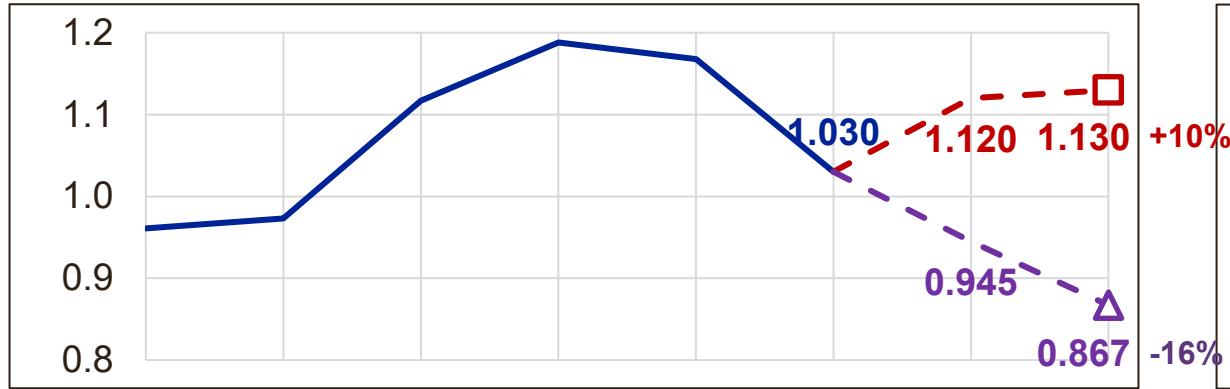
Level 5-Year Targets



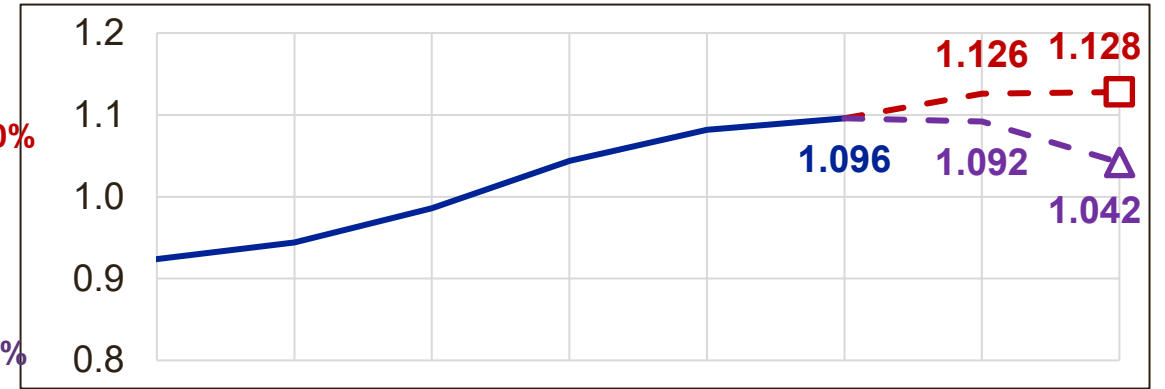
Results - Fatality Rate

- Historic Data
 - - □ - - High Prediction
 - - △ - - Low Prediction
 - - ◇ - - Level 5-Year Target
- ✓ Recommended Approach

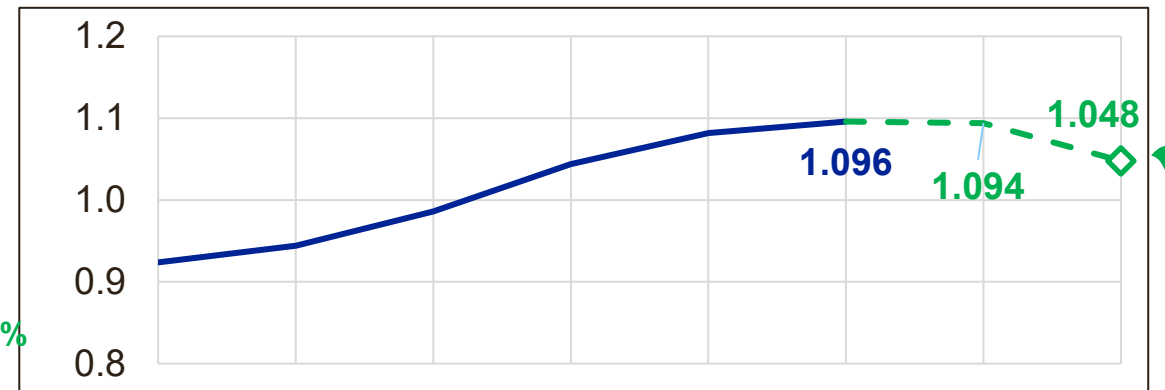
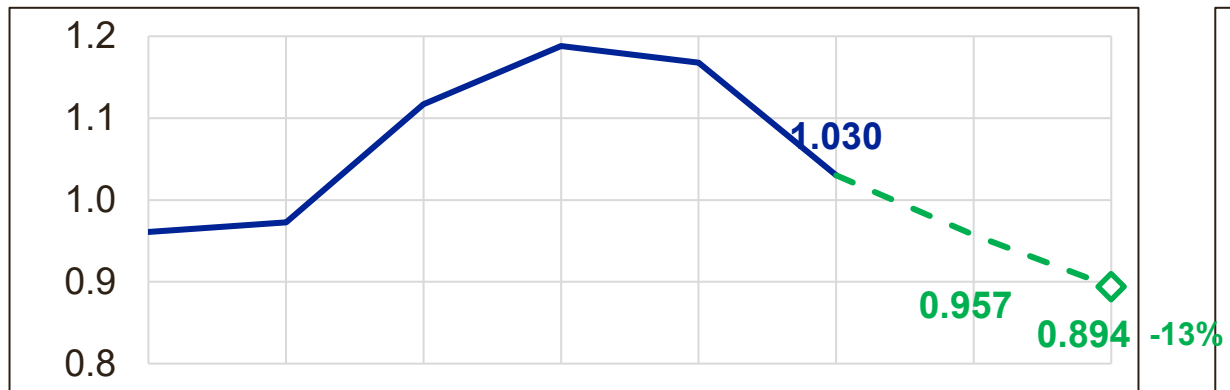
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Five-Year Averages



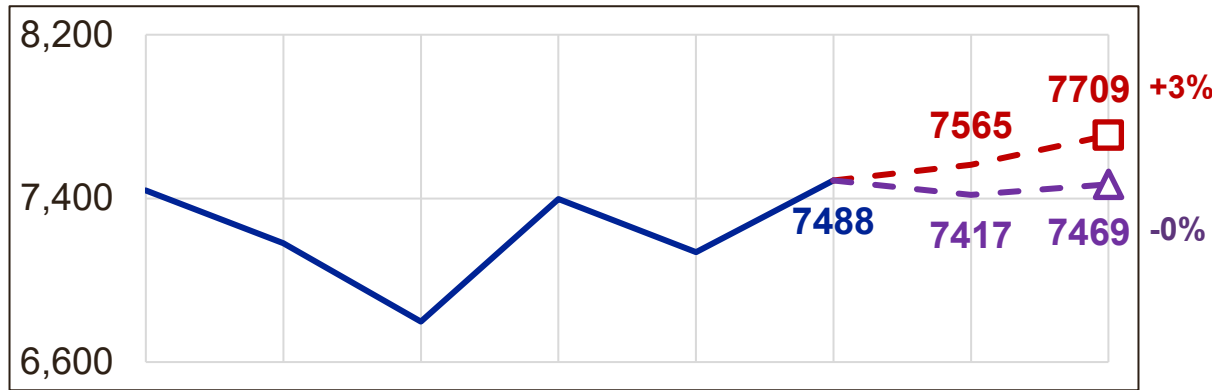
Level 5-Year Targets



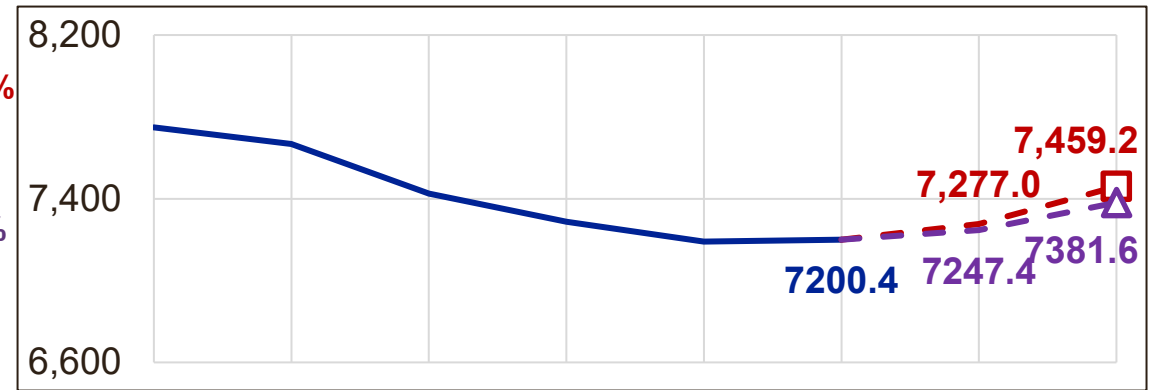
Results - Serious Injuries

- Historic Data
 - - □ - - High Prediction
 - - △ - - Low Prediction
 - - ◇ - - Level 5-Year Target
- ✓ Recommended Approach

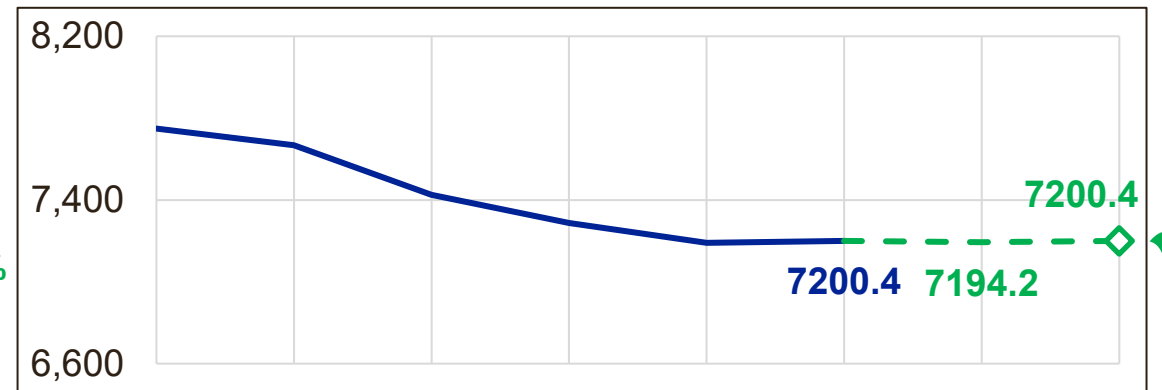
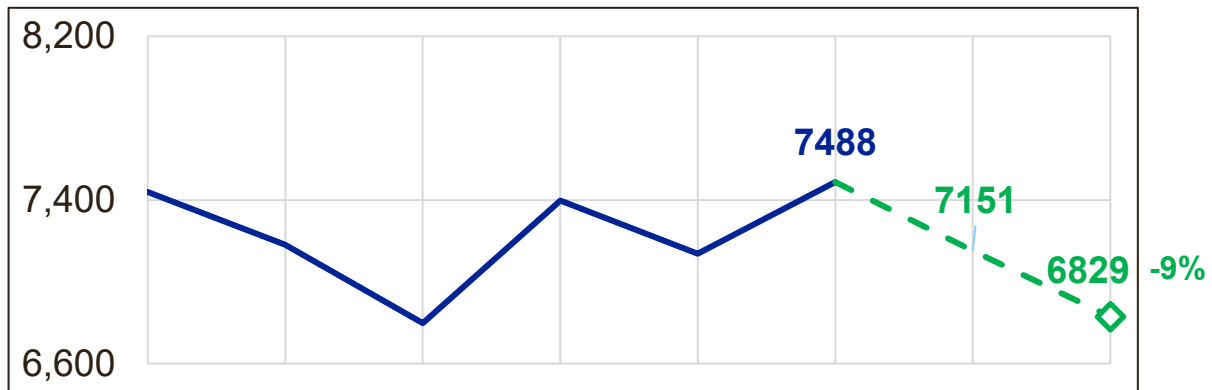
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Five-Year Averages



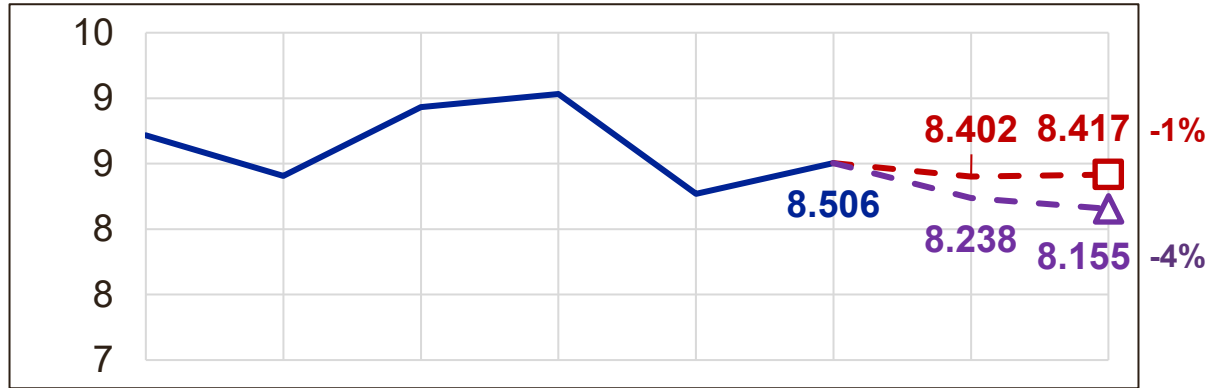
Level 5-Year Targets



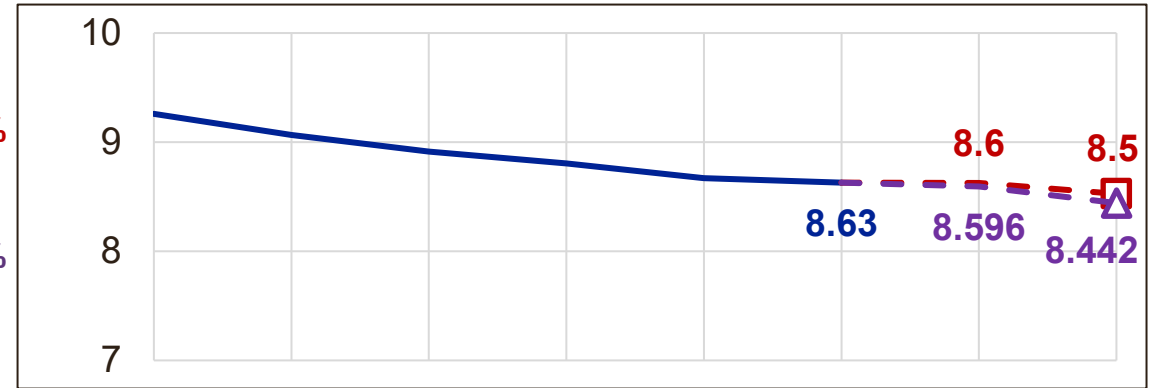
Results - Serious Injury Rate

- Historic Data
 - - □ - - High Prediction
 - - △ - - Low Prediction
 - - ◇ - - Level 5-Year Target
- ✓ Recommended Approach

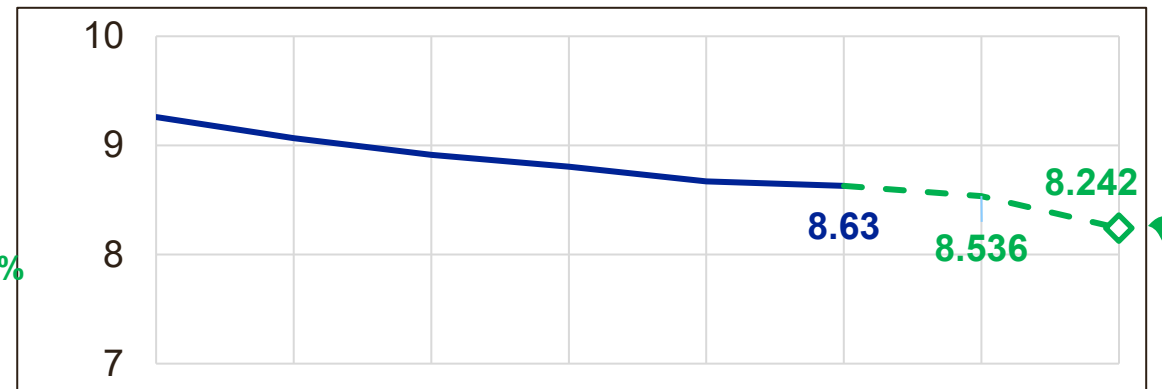
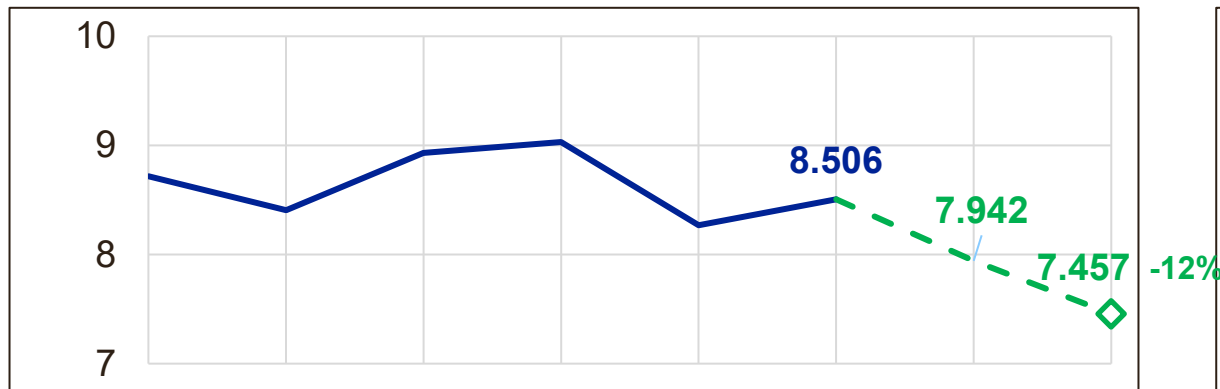
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Five-Year Averages



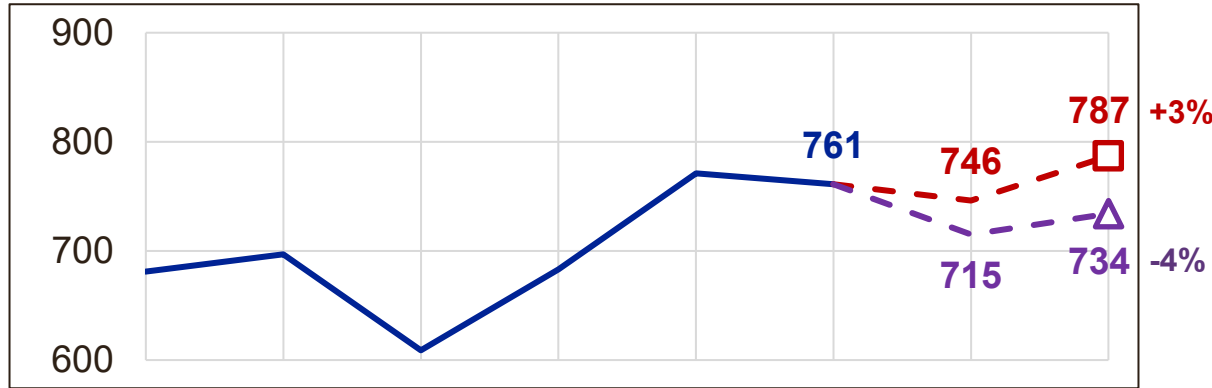
Level 5-Year Targets



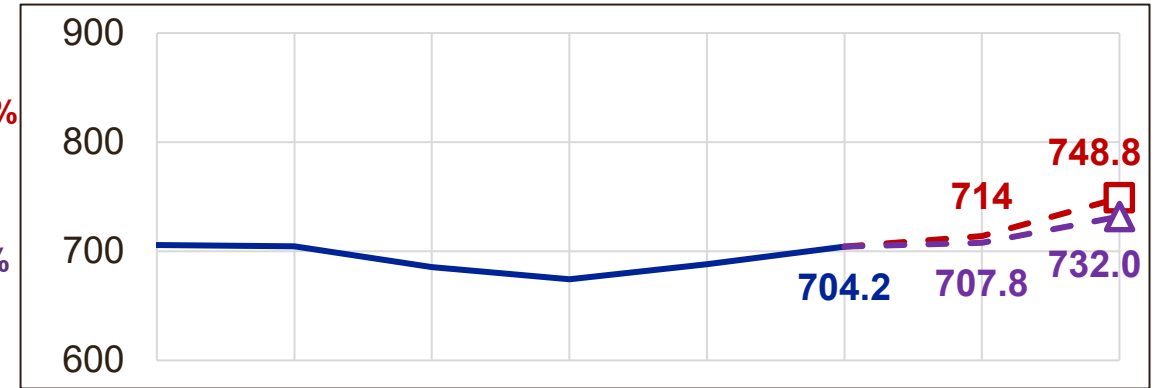
Results - Non-Motorized Fatalities and Serious Injuries

- Historic Data
 - - □ - - High Prediction
 - - △ - - Low Prediction
 - - ◇ - - Level 5-Year Target
- ✓ Recommended Approach

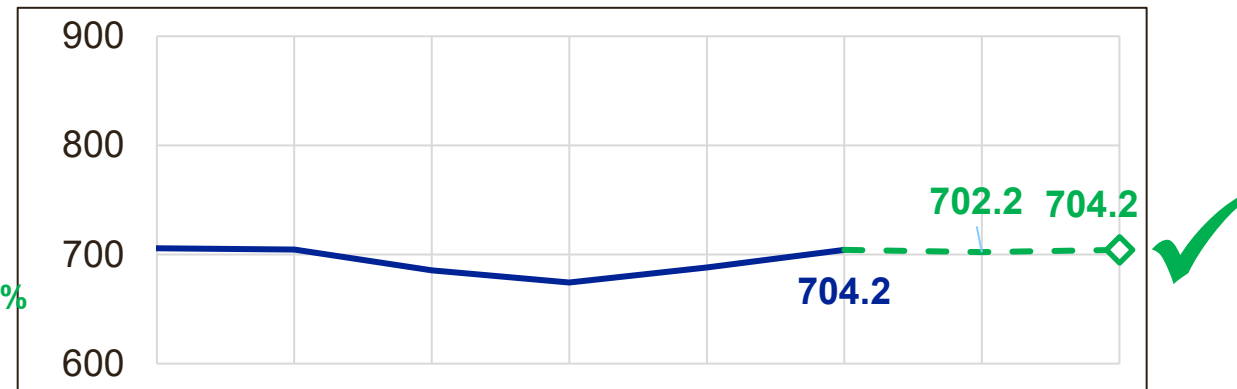
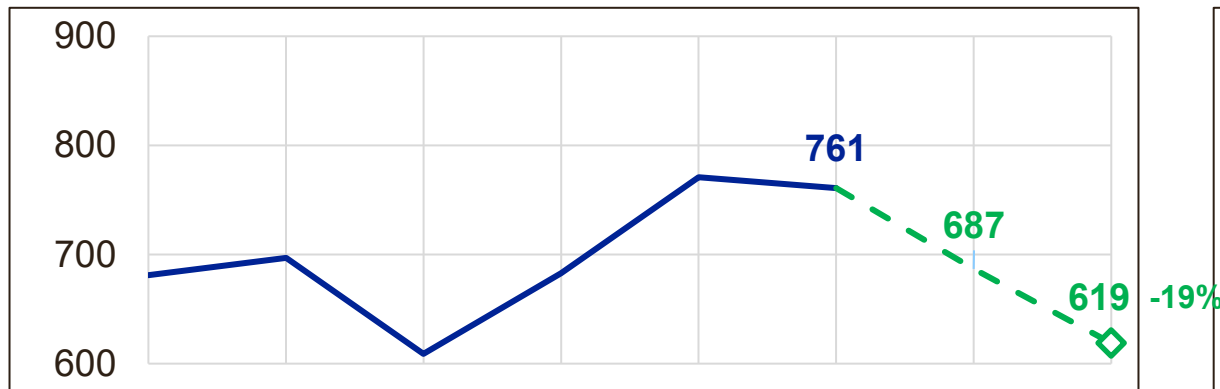
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Five-Year Averages



Level 5-Year Targets



Proposed 2025 Federal Safety Targets

- Proposed safety performance values for 2025 based on the approach best meeting the requirement to achieve level or improved five-year averages from the baseline conditions.

Measure	2023 Actual Values	Proposed 2025 Values	Percent Change	Federal Target Approach
Fatalities	907	819	-10%	Level 5-Year Average
Fatality Rate*	1.030	0.894	-13%	
Serious Injuries	7,488	6,829	-9%	
Serious Injury Rate*	8.506	7.457	-12%	
Non-Motorized Fatalities + Serious Injuries	761	619	-19%	

*Based on the calculated performance for the count measures and projected average VMT growth of 2% per year for 2024 and 2025.

Next Steps

- CTB adoption of proposed federal targets at July meeting



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Thank you.



VIRGINIA DEPARTMENT OF RAIL
AND PUBLIC TRANSPORTATION

