Transportation Safety Office Action Plan

WASHINGTON STATE TRANSPORTATION COMMISSION

Gabe Philips, Deputy State Safety Engineer
February 19, 2025

Reversing History

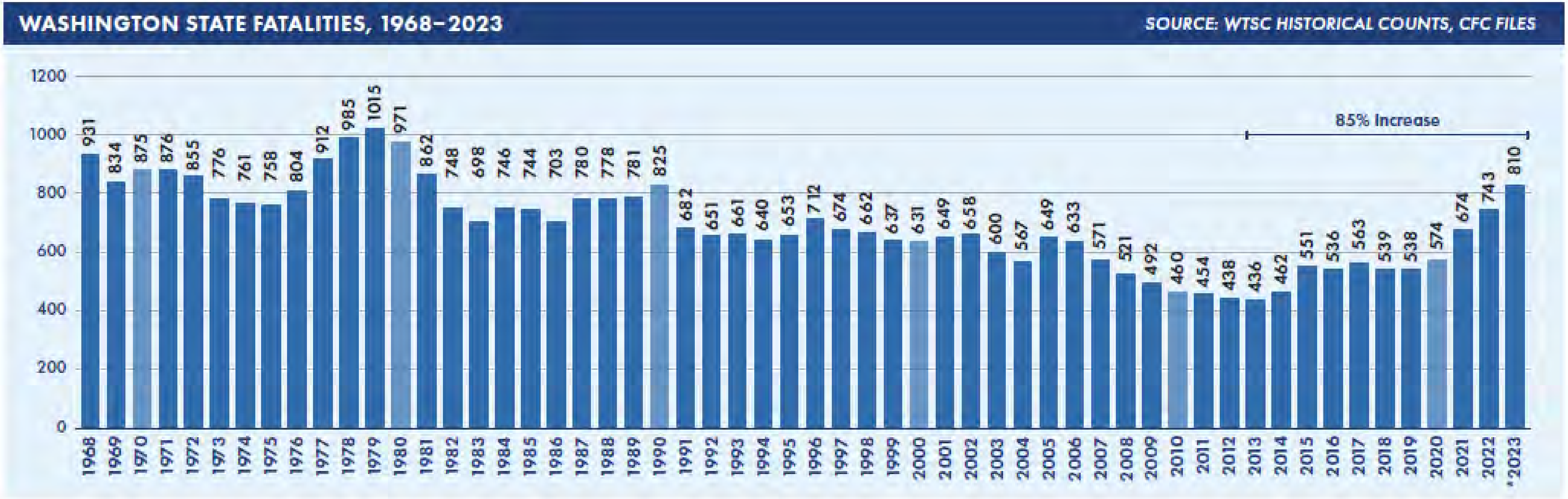


FIGURE 1. WASHINGTON STATE TRAFFIC FATALITIES, 1968-2023

**2023 data is an unofficial estimate, incomplete, subject to change.*

2023

416 fatalities involving an alcohol/drug *impaired driver* – a 63% increase since 2019

251 fatalities involving a *speeding driver* - a 65% increase since 2019

160 *pedestrians* killed – the highest on record

142 *motorcyclists* killed – the highest on record

136 fatalities involved a *distracted driver*, the highest number since the distracted driving law was passed in 2017

The work ahead

Actions to Strengthen WSDOT's Hwy Safety Program

Organization and Communication	Advance Key Initiatives	Policy and Guidance Development	Training and Capacity Building
Secretary All-Staff Message re Advancing the Agency Highway Safety Program and Performance	Continue Advancing Work Zone Safety Initiative w/ USI and Others	Prioritize Implementation of Executive Order on Safe Systems Approach	Conduct Annual WSDOT Traffic Safety Workshop (3 hr virtual Fall 2023, full day hybrid 2024 and beyond)
Strengthen WSDOT Safety Program Organization, Resources, and Strategic Direction	Implement Speed Management / Injury Minimization Policy	Continue Implementation of Complete Streets Legislative Direction	Develop Safety Program Training Program Modules FY 23-24
	Advance Systemic Safety for Active Transportation with an Equity Lens	Center Safe System Approach in Updated Strategic Highway Safety Plan	Deliver Traffic Safety Training Program beginning FY 24-25, in-person and on-line
	Increase partnership and support for local agency and transit highway safety programs	Develop/Adopt Roundabout First Intersection Control Policy	

Strategic Highway Safety Plan: Target Zero

Strategic Highway Safety Plan: Target Zero

- Drives **S**afety policy at WSDOT
- Incorporates the Safe System Approach
- Identifies emphasis areas
- Recognizes the importance of focusing on traditionally underrepresented communities

Available on WTSC website!

Target Zero Plan Emphasis Areas (2020-2022 data)

Road User Behaviors
- Impairment 60%
- Speeding 32%
- Unrestrained Occupant 21%
- Distraction 17%

Road User Groups
- Young Driver (15-24) 26%
- Active Transportation User 21%
- Older Driver (70+) 13%

Road Location
- Lane Departure 44%
- Intersection 24%

Vehicle Types
- Motorcyclist 16%
- Heavy Vehicle 13%

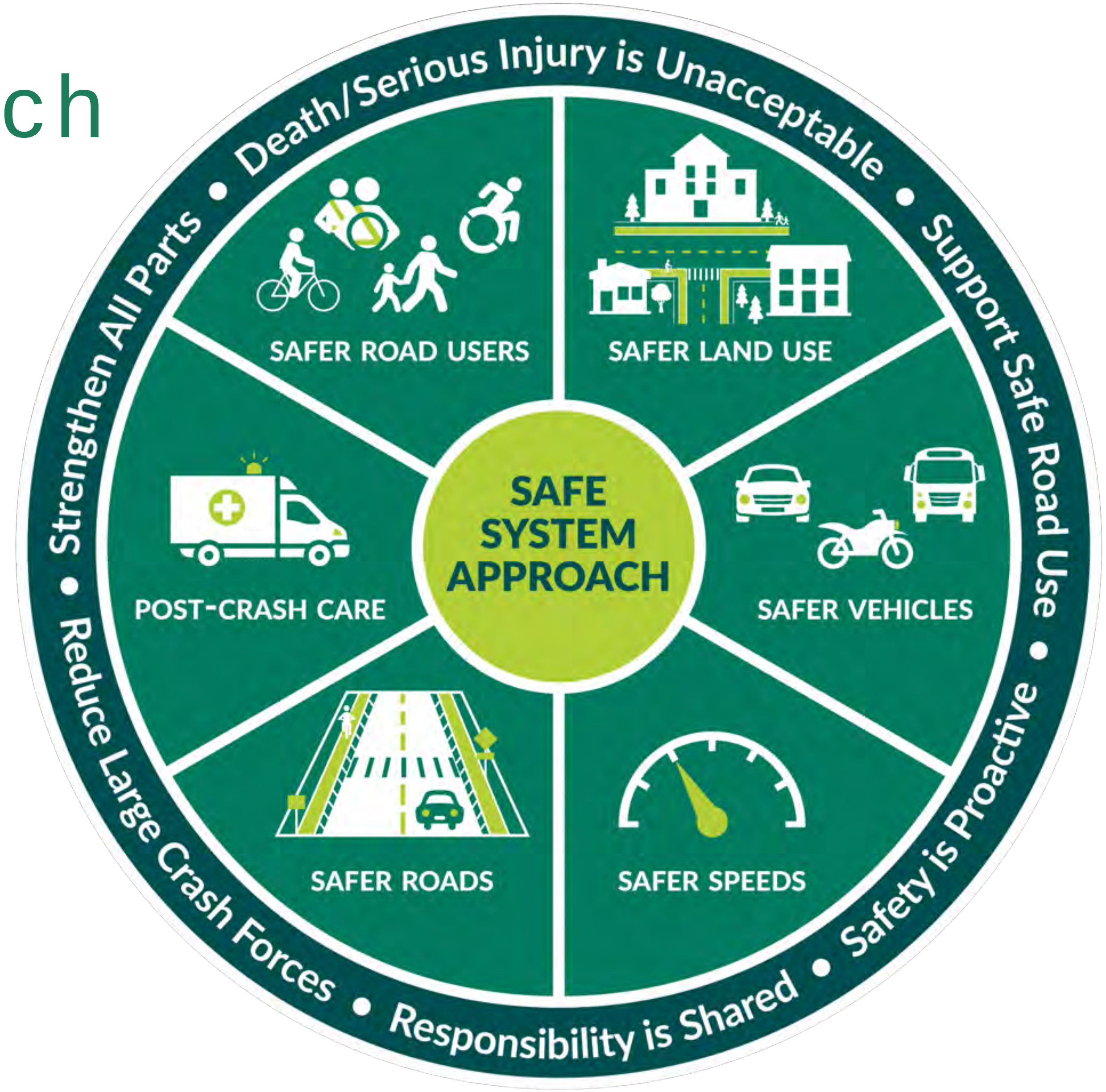
Emphasis areas and the proportion of fatalities that **involved** each factor during 2020-2022.

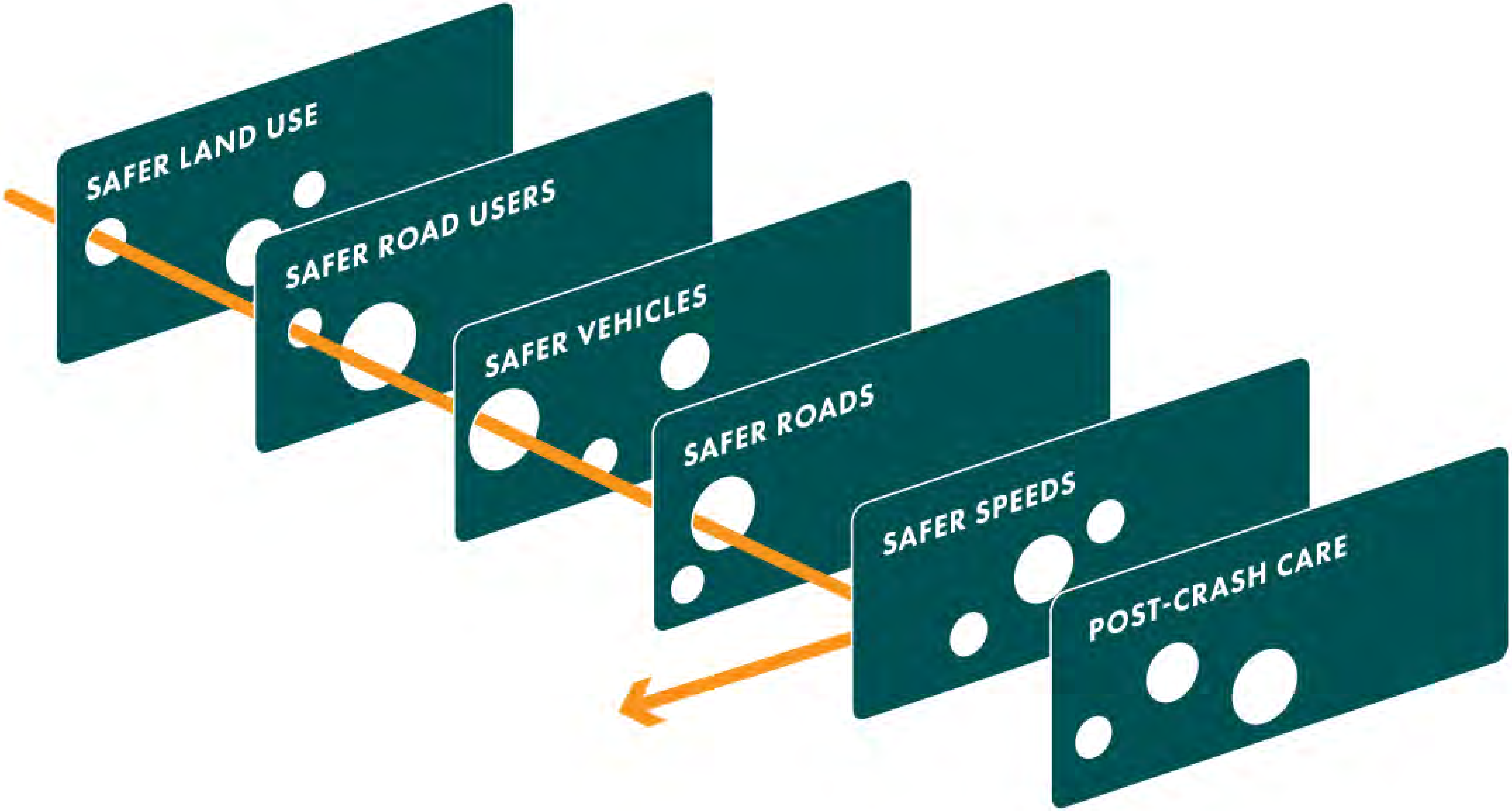
Exceptions: Active Transportation Users and Motorcyclists were the party killed in the crash

Safe System Approach

The Safe System approach involves six *overlapping and integrated* elements that provide layers of safety.

We cannot rely on just one element alone to prevent death and serious injury.




SAFER LAND USE
SAFER ROAD USERS
SAFER VEHICLES
SAFER ROADS
SAFER SPEEDS
POST-CRASH CARE

Safe System Approach

↑ Exposure

- Additional conflicts/Increased complexity
- Larger cross section
- Increased AADT

X

↓ Likelihood of crashes

- Reducing crash types
- Lane widths, lighting, curbs, shoulders

X

↑ Severity of crashes

- Greater speeds
- Angle crashes
- Vehicle type/weight

Safe System Approach

Traditional approaches to road safety	→	Safe System Approach
Focus on total crashes	→	Focus on fatal and serious injuries
Reduce the likelihood of crashes	→	Strengthen all parts of the system to reduce exposure, likelihood and severity of crashes
Road user has primary responsibility	→	A shared responsibility exists between those who design, build, operate and use the roads and vehicles
Change individual road user behavior	→	Support safe road use
Safety is addressed after crashes occur	→	Safety is proactive
Roads are made as safe as practicable	→	Roads are self-explaining and forgiving to reduce large crash forces

Safer Land Use

Road safety policy should be integrated into broader community planning to influence travel patterns and attractiveness of different modes

“What all crashes have in common is cars. When the public health community identifies a threat to public health, the first strategy is to separate people from that threat. I recognize that we are a car-centric country with a car-centric economy. That said, we should provide the people we serve with viable options to driving. Walkable and transit-oriented land use allows people to live, work and play without reliance on cars. Separating people from cars ***with smarter, safer land use*** *saves lives.”*

- Former WSDOT Secretary Roger Millar

Safer Land Use

Safer land use enables reduced car use and shortens travel distances, both of which reduce crash exposure.

Safer land use planning addresses the interactions between properties, roads, and facilities for walkers, rollers, transit, and commercial and other vehicles.

It is important to consider and plan where people live in relation to where they need to travel and how they will get there safely.

Safer Land Use Strategies

- Update planning documents to prioritize multimodal transportation facilities
- Use WSDOT's Vulnerable Road User Equity Score in land use policies to invest in disadvantaged locations
- Increase investment of infrastructure in historically underserved areas
- Enact policies to support reductions in vehicle miles traveled
- Implement policies that support compact, transportation-efficient urban design

Taken from Safer Land Use strategies in Appendix B

Safer Land Use Strategies

- Locate public facilities on lower-speed roadways
- Separate high-speed roads from mixed land uses
- Implement proactive access management strategies to minimize crash exposure
- Evaluate performance using multimodal level of service
- Complete infrastructure connectivity for pedestrians and bicyclists

Taken from Safer Land Use strategies in Appendix B

Policy Recommendations to Support Target Zero

Reduce Impaired Driving: 0.05% BAC *per se* Limit

Adopt the *per se* 0.05 percent Blood Alcohol Concentration limit for driving.

- Already adopted in 75% of countries (0.05 or lower)
- Provides broad deterrence to prevent DUI
- Reduces fatalities (avg. -11%) by encouraging planning for sober travel (rideshare, taxi, bus, sober driver, etc.)
- Unlikely to adversely impact businesses, law enforcement, or courts

Safe System Speeds

- Set speed limits based on injury minimization principles (rather than 85th percentile)
- Design streets and roads to reduce speeds and potential crash forces
- Automated enforcement that is conspicuous and predictable
- Highly visible officer enforcement

Driver Education

- Increase affordability to lower-income young drivers (scholarships, subsidized programs)
- Increase access to underserved areas by expanding instructor training and certification
- Eventually expand training requirements for new drivers 18-24 years

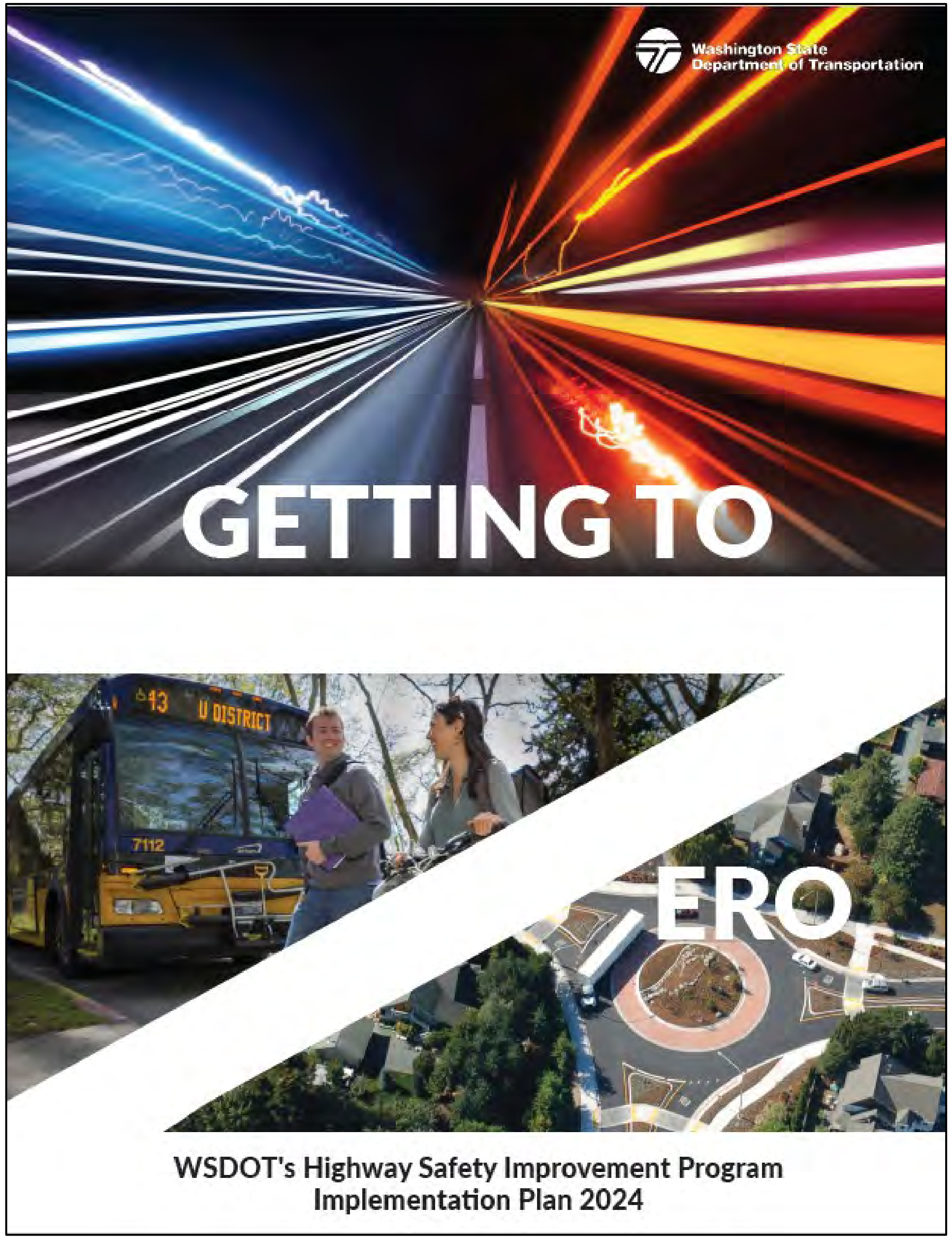
Fund Complete Streets

- Funding for projects to include:
  - Protected trails/sidewalks
  - Protected bike lanes
  - Vulnerable road user crossings that are well-marked and lighted and reduce/eliminate blind spots

Highway Safety Improvement Program Implementation Plan

Getting to Zero

- Required for **I-2** Safety
- Implementation Plan
- RCW 47.05 (Priority Programming Process)
- Subcategories in Safety Program Follow Emphasis Areas

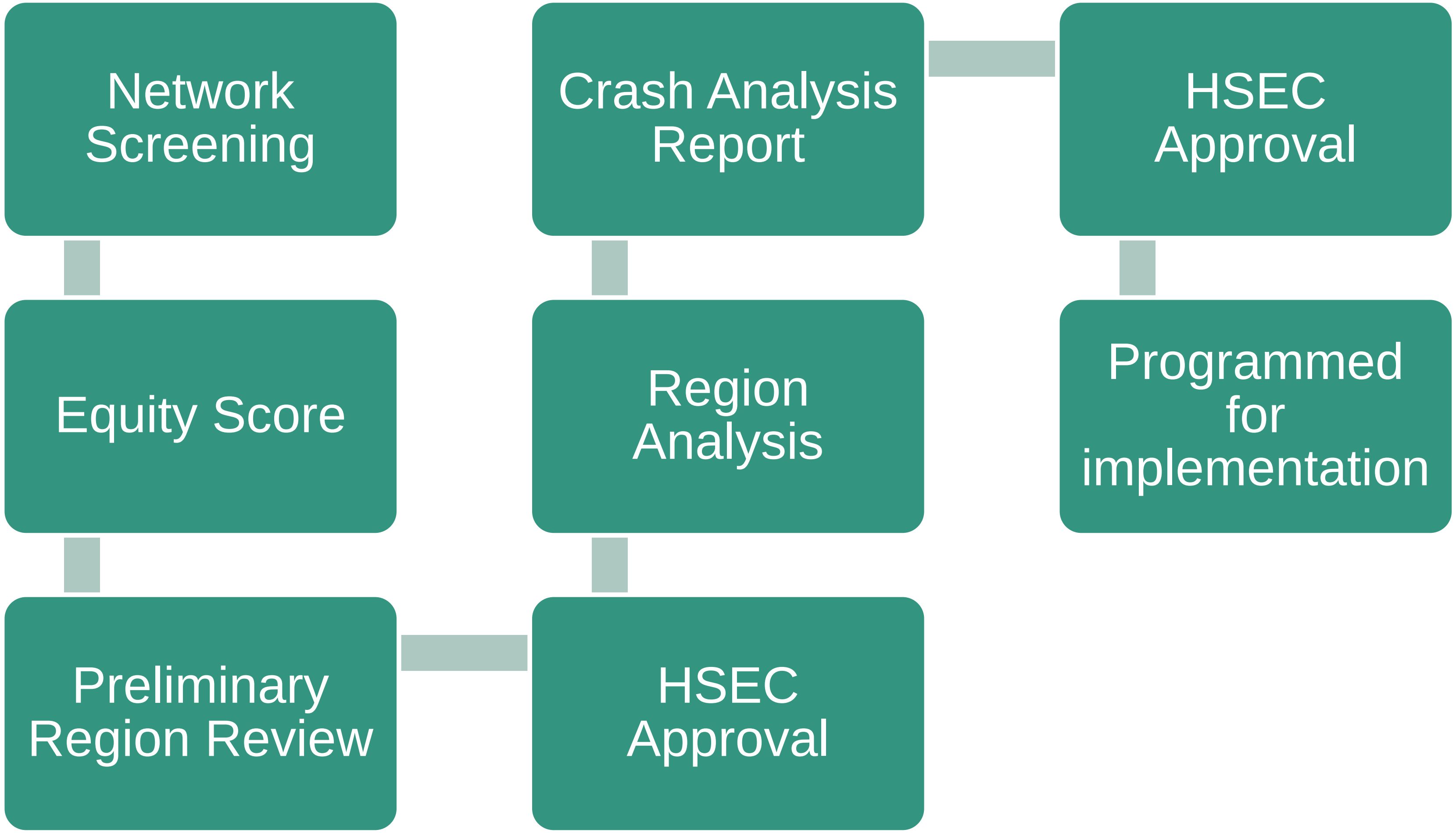


Getting to Zero: Investment Strategy

Type of Investment	Emphasis area	Strategies/Subcategories
Reactive Safety Investments	Intersection-related	Intersection Analysis Locations
	Lane departure	Crash Analysis Locations/Crash Analysis Corridors
Proactive Safety Investments	Intersection Systemic Safety	Compact roundabouts
	Lane departure	Rumble Strips
		High Friction Surface Treatment Program
		Systemic Curve Treatments
		Redirectional Landforms (Dormant)
		Breakaway Cable Terminal Replacement
		Guardrail Infill and Retrofit
		Field Assessments
		Edge Line Visibility Pilot
	Active Transportation	Pedestrians and Bicyclists
		Motorcyclists
	Safety Decision-making and Performance Improvement	MIRE FDE
		AASHTO HSM Predictive Method Tools
		AASHTO SafetyAnalyst IHSDM Crash Prediction Module
		MPO/WTSC Planning/Target Setting
	Safe System	Speed Management

HSIP Funding Split

Crash Analysis Locations



Highway Safety Executive Committee

Highway Safety Executive Committee

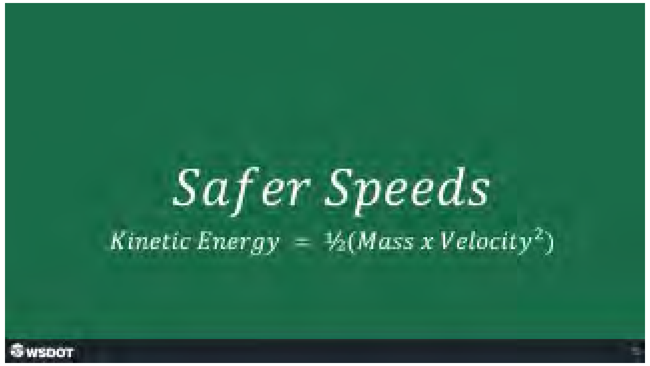
Highway safety-related agency policy

Methods for prioritization and programming of highway safety program investments

Resource allocation decisions and investments

Highway Safety Executive Committee

- **HSEC** — Set Policy
  - **HSIG** — Technical Input
  - **Transportation Safety Office** — Perform Tasks



Current Efforts

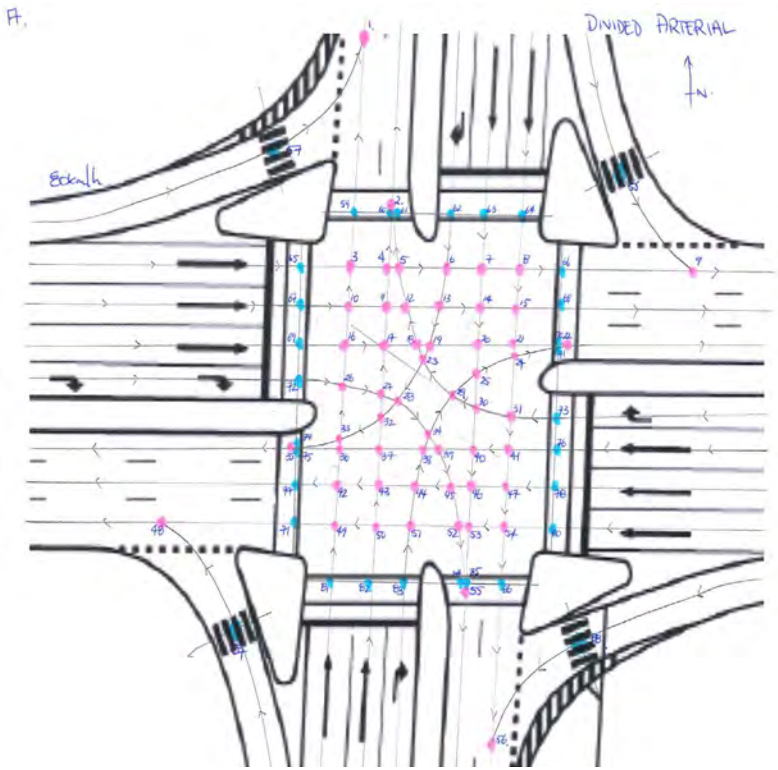
Roundabout First Policy

- Roundabouts can reduce fatal collisions by as much as 90%, 7 MPH reduction in speeds before and after
- Self-enforcing and self-explaining design addressing intersection-related crashes
- Updated Intersection Control Evaluation to prioritize this countermeasure

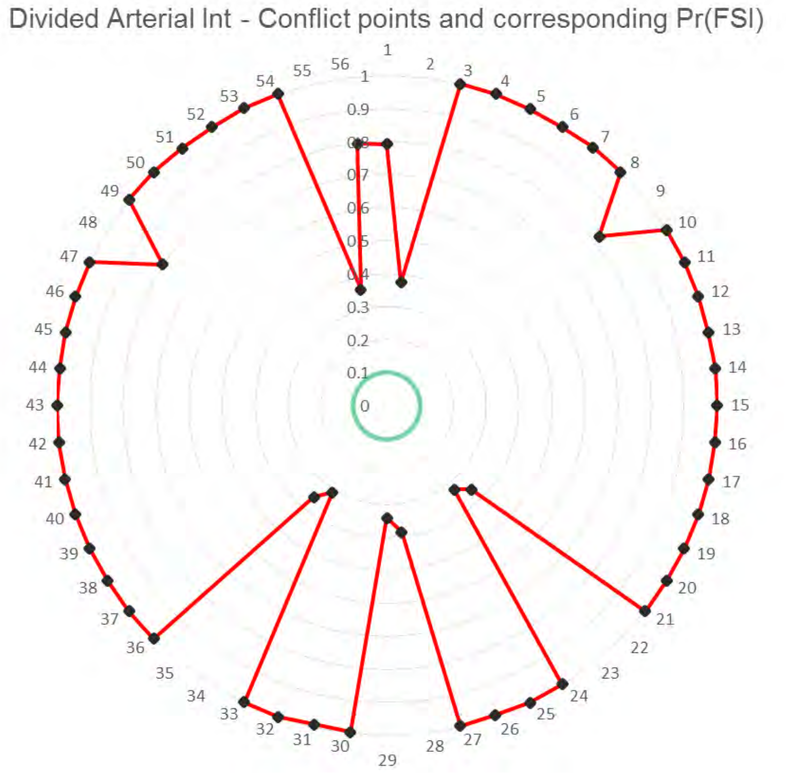
Roundabout on 84th Avenue NE in Medina, WA (Photo: S. Bonjukian)

Reduce intersection energy

Divided arterial signals - 80 km/h x 60 km/h



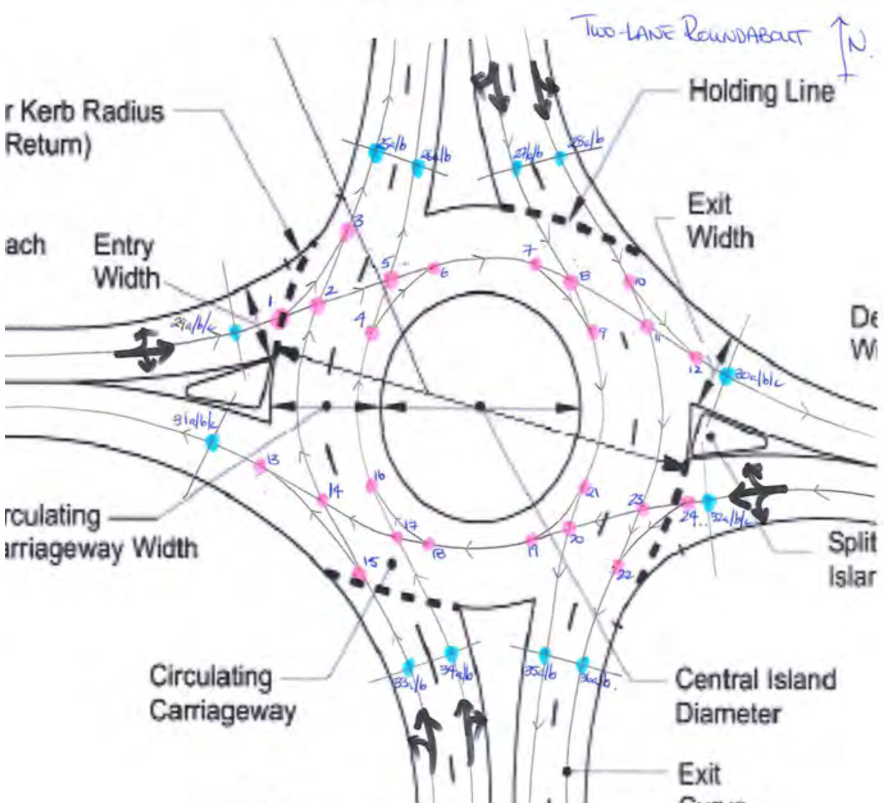
K = ½ mv²

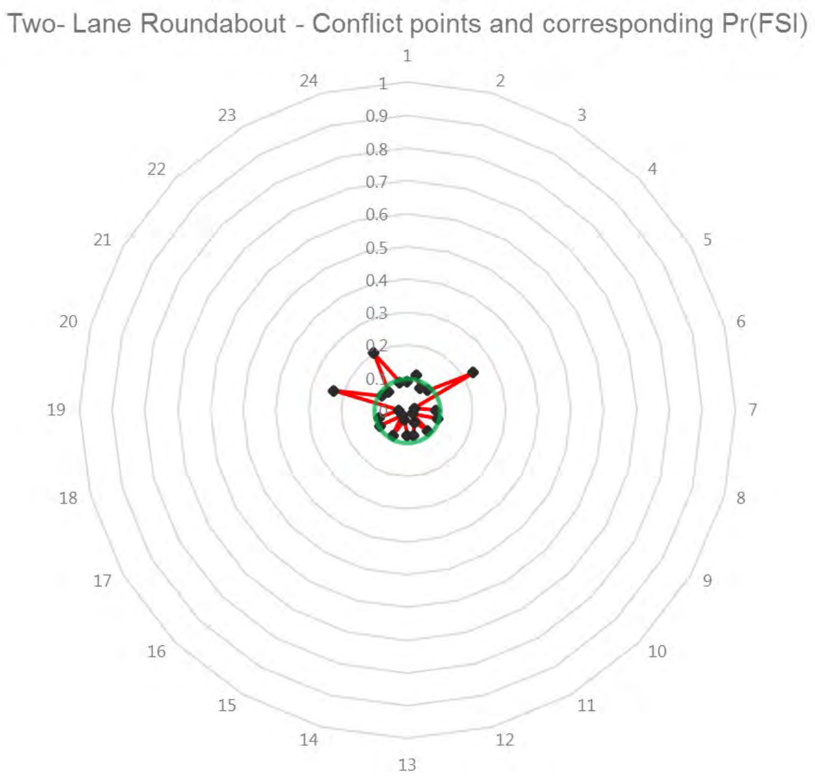


Source: Blair Turner

Reduce intersection energy - Design

Divided arterial roundabout - 80 km/h x 60 km/h





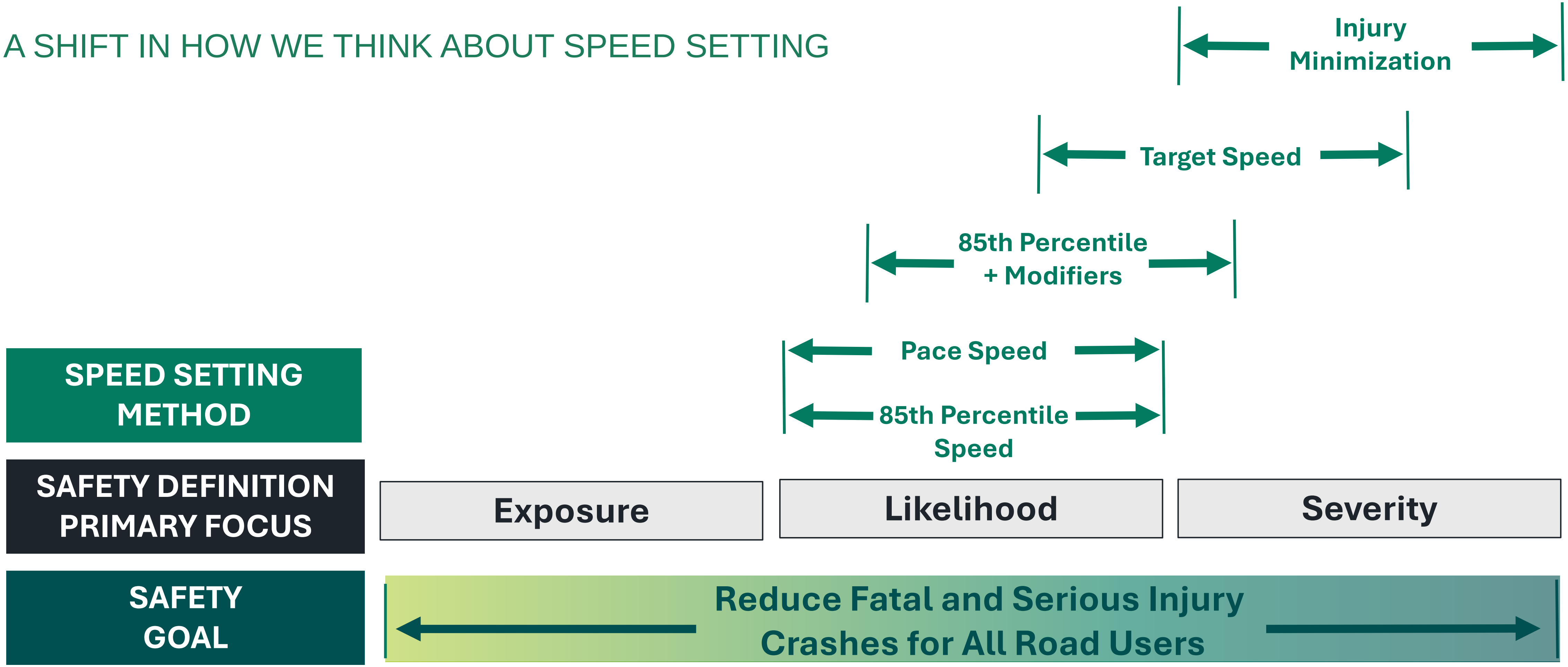
Source: Blair Turner

$Safer\ Speeds$

$$Kinetic\ Energy\ =\ ½(Mass\ x\ Velocity^2)$$

Speed and Safety

A SHIFT IN HOW WE THINK ABOUT SPEED SETTING



Safe System Speeds

- Set target speeds based on injury minimization
  - Urban/Suburban – focus on safety for all users
  - Rural – incorporate design that will reduce crash exposure, likelihood, and exposure
- Some locations will require multiple iterative steps

Fatality Probability and Vehicle Impact Speed

Crash Type	Driver Speed (10% Fatal Injury Risk)
Pedestrian or bicyclist/vehicle crash	20-25 MPH
Side impact crash – vehicle/vehicle	30 MPH
Head-on vehicle/vehicle	30-45 MPH
Rear-end vehicle/vehicle	35-70 MPH

WSDOT Injury Minimization & Speed Management Policy Elements and Implementation Recommendations

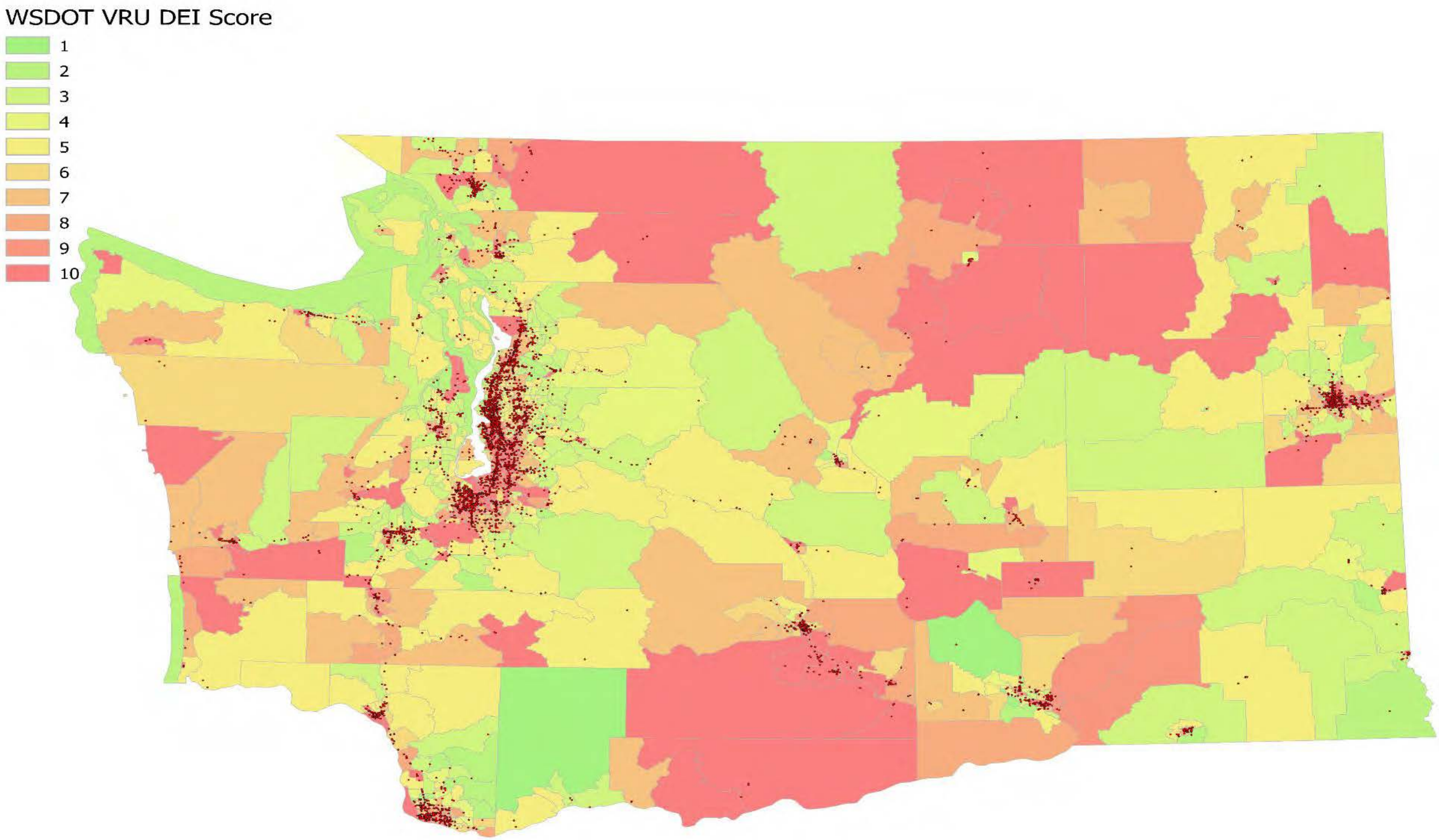
Self-Enforcing Roads

- Human-scale design
- Establish the context for safety
- Reduce speeds

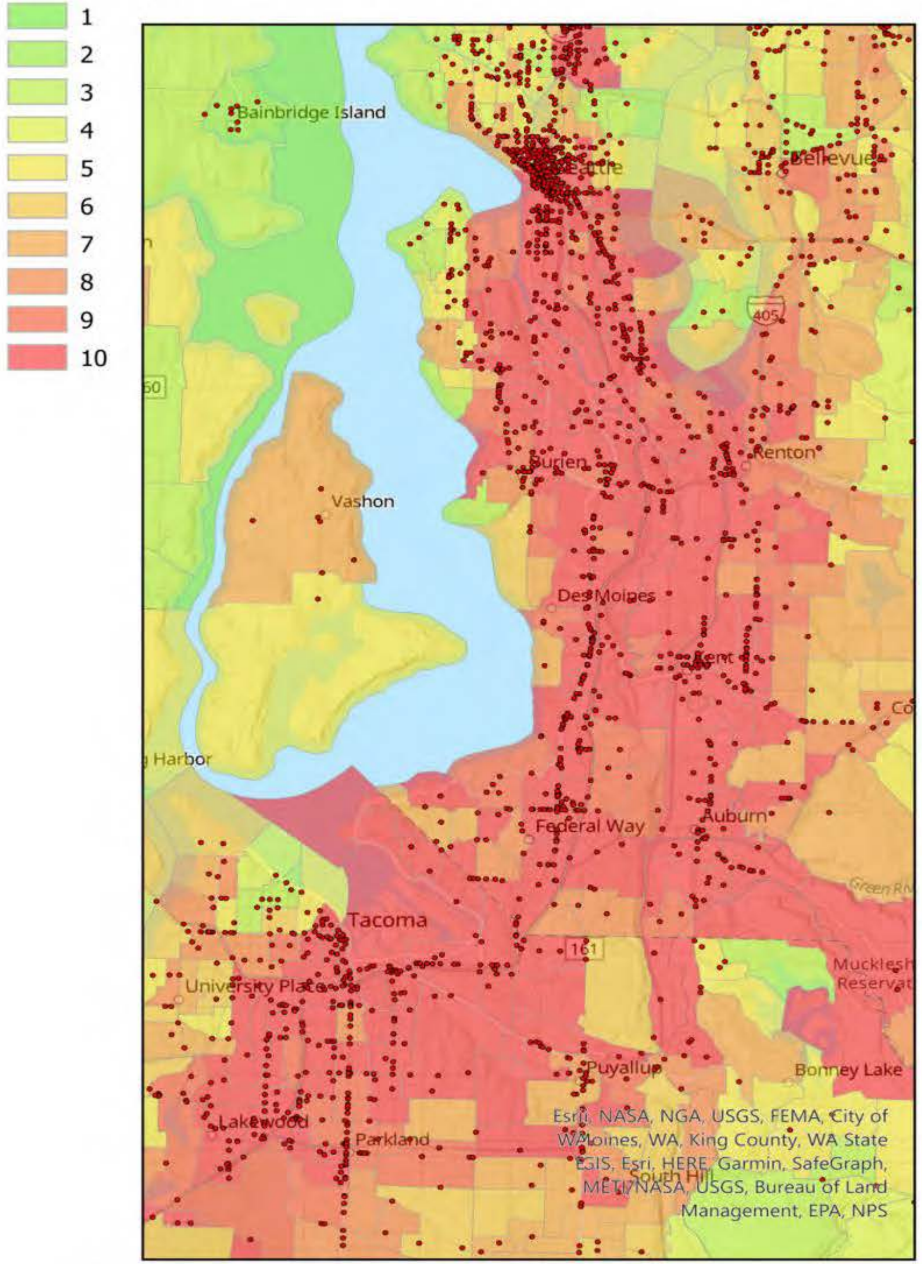
CS Implementation at WSDOT

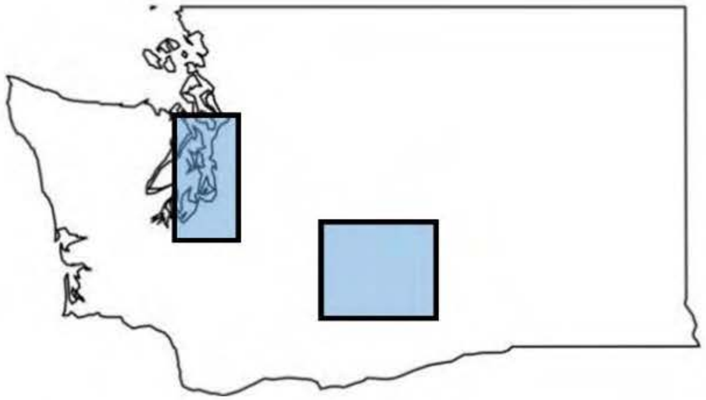
- Setting ourselves up for success in applying the tools to reduce speeds in population centers

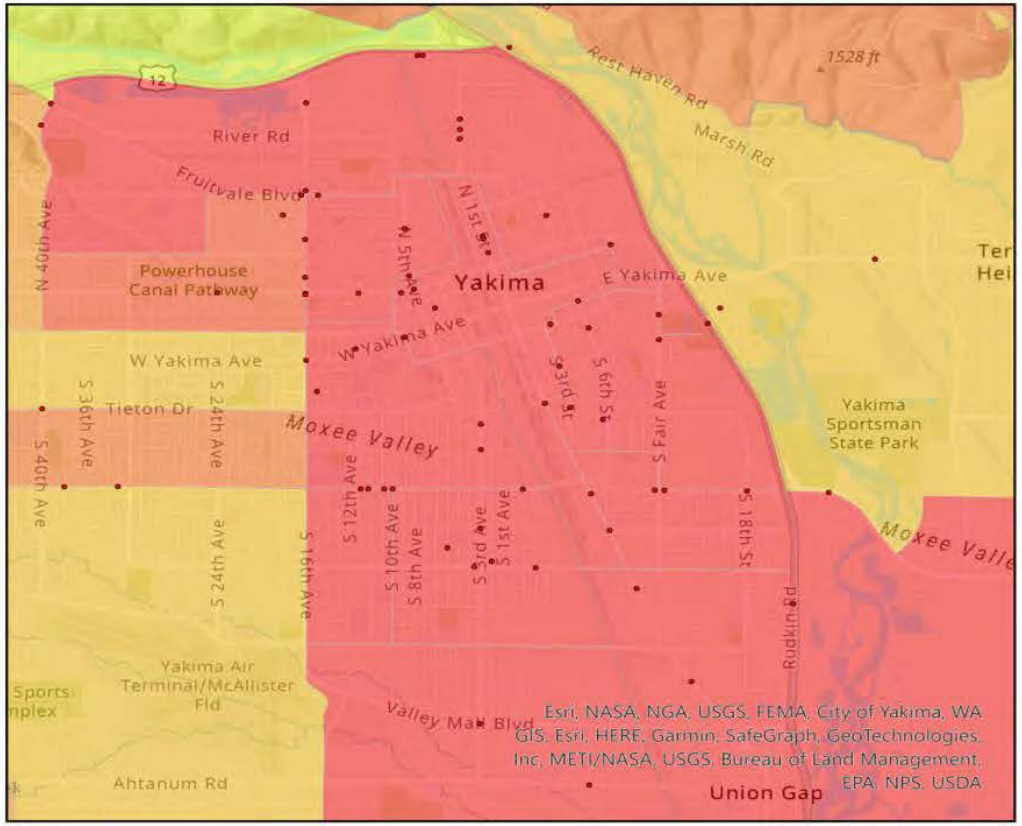
Incorporation of Equity Index for Active Transportation



WSDOT VRU DEI Score







2025 Safety Conference

Wade Alonzo
Program Director
Washington Traffic Safety Commission

July 15th-17th, 2025

WASHINGTON TRAFFIC SAFETY SUMMIT

SPOKANE CONVENTION CENTER

Register Here!

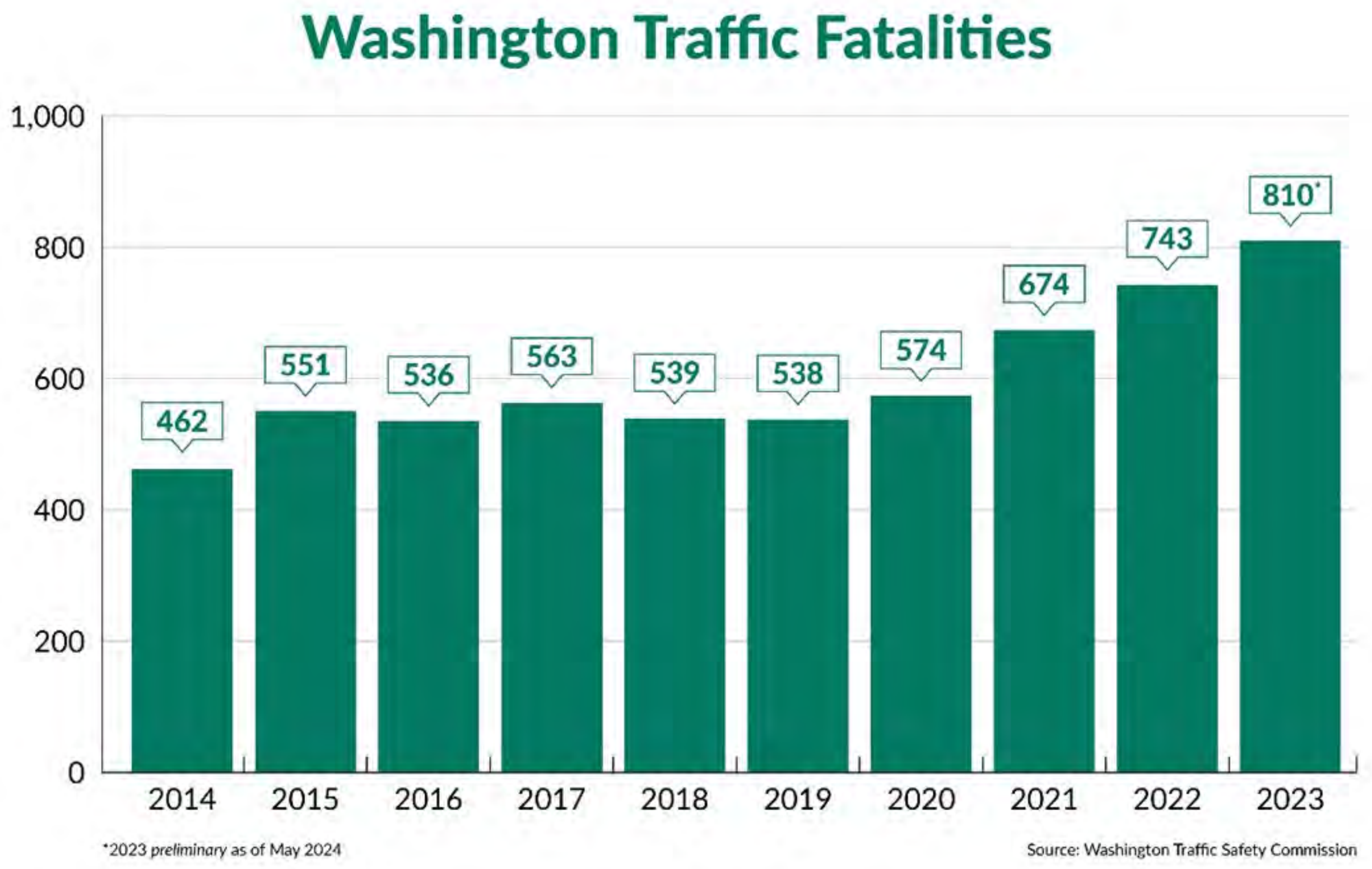
Safety needs

10-year need: $2.37 billion
2025-27 need: $475 million

Without significant intervention, fatal and serious crashes will continue to rise.

Washington state can mitigate this crisis by directing more resources for safety to:

- state highways in population centers
- rural areas
- work zones

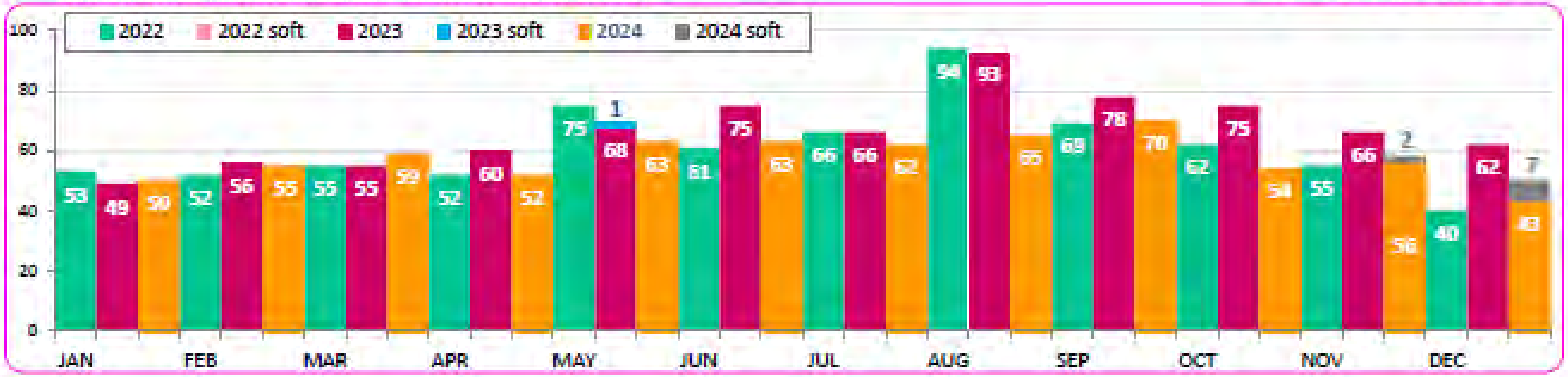


Past allocations: approximately $100 million

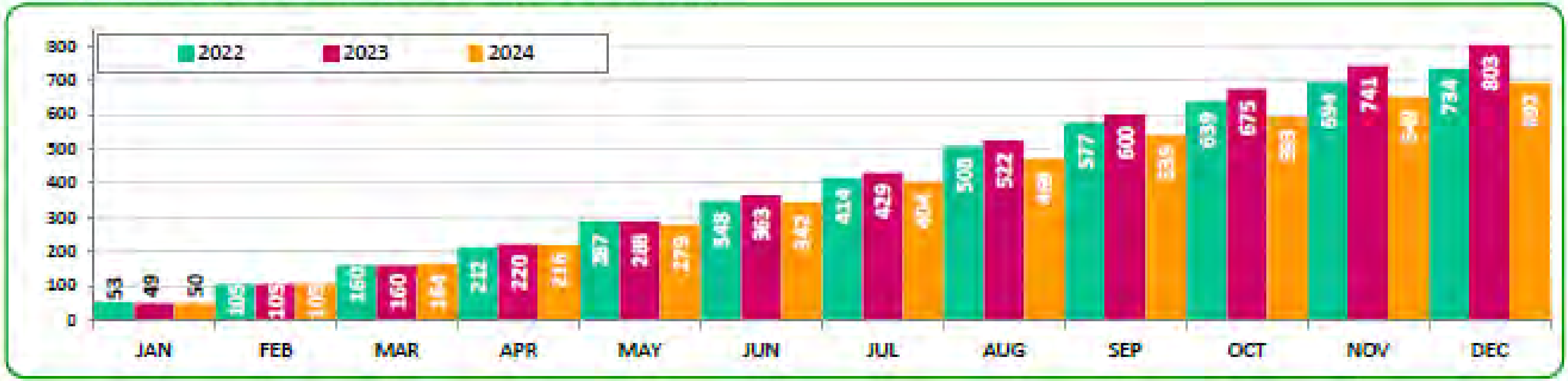
Good News so Far!

FATALITIES *(in WSDOT datamart - includes death after 30 days)*

*soft = Fatal Press Memo was received



FATALITIES *(Cumulative Monthly Totals, January 2022 - Available 2024)*



Questions?

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