

ITEM 10 – Information

March 20, 2019

Activities to Address Safety Challenges in the Region:
Virginia Department Of Transportation (VDOT)

Staff Recommendation: Briefing on VDOT Safety Activities.

Issues: None

Background: In January, the board approved Resolution R11-2019 to set performance-based planning and programming (PBPP) highway safety targets for 2019. As part of the resolution, the board requested that member DOTs report quarterly on their efforts to improve safety. In this first briefing, VDOT will provide an overview of Virginia's safety program. In subsequent months, the District and Maryland DOTs will provide similar briefings.



MEMORANDUM

TO: Transportation Planning Board
FROM: Jon Schermann, TPB Transportation Planner
SUBJECT: State DOT Safety Presentations to the Board: CY 2019
DATE: March 14, 2019

This memo proposes a schedule and proposed themes of state DOT safety presentations to the Transportation Planning Board (TPB) in calendar year 2019.

BACKGROUND

In January, the TPB approved Resolution R11-2019 setting performance-based planning and programming (PBPP) highway safety targets for 2019. As part of the resolution, the board requested that member Departments of Transportation (DOT) report quarterly on their efforts to improve safety. It is anticipated that each DOT will come to the board three times during calendar year 2019.

PLAN

While DOTs have the flexibility to craft their presentations to highlight their individual approaches to reducing fatalities and serious injuries in our region, staff recommend that each DOT address a common set of themes for their first, second, and third presentations. Table 1 below describes the staff recommended themes for each round of presentations.

Table 1: DOT Presentation Themes

Presentations	Themes
First round (March, April, May)	<ul style="list-style-type: none"> - Overview of safety program; - Most significant factors contributing to fatal and serious injury crashes; and - Current strategies, programs, and activities to improve safety.
Second round (June, July, September)	<ul style="list-style-type: none"> - Results of actions to date; - Examples of state collaboration with TPB jurisdictions; and - Next iteration of statewide safety targets. <p><i>(note: themes subject to change based on board comments after the first round of presentations.)</i></p>
Third round (October, November, December)	<ul style="list-style-type: none"> - Monitoring and assessment of systems & programs; - Suggestions for further collaboration with the TPB; and - Recommendations for actions the TPB and individual member jurisdictions can take to improve safety. <p><i>(note: themes subject to change based on board comments after the second round of presentations.)</i></p>

SCHEDULE

The state DOT presentations will be staggered so that only one such presentation will be made at any given meeting. On March 20, 2019, the Virginia Department of Transportation (VDOT) will

present to the board followed in subsequent months by the other two DOTs. Table 2 (below) describes the staff-proposed schedule for the 2019 DOT safety presentations.

Table 2: Proposed Schedule

TPB Meeting	Presenter	Status
March 20, 2019	VDOT	firm
April 17, 2019	DDOT	firm
May 15, 2019	MDOT	firm
June 19, 2019	VDOT	tentative
July 24, 2019	DDOT	tentative
September 18, 2019	MDOT	tentative
October 16, 2019	VDOT	tentative
November 20, 2019	DDOT	tentative
December 18, 2019	MDOT	tentative



STATE OF HIGHWAY SAFETY IN VIRGINIA

Working to Drive Deaths and Serious Injuries

Towards Zero on Our Highways

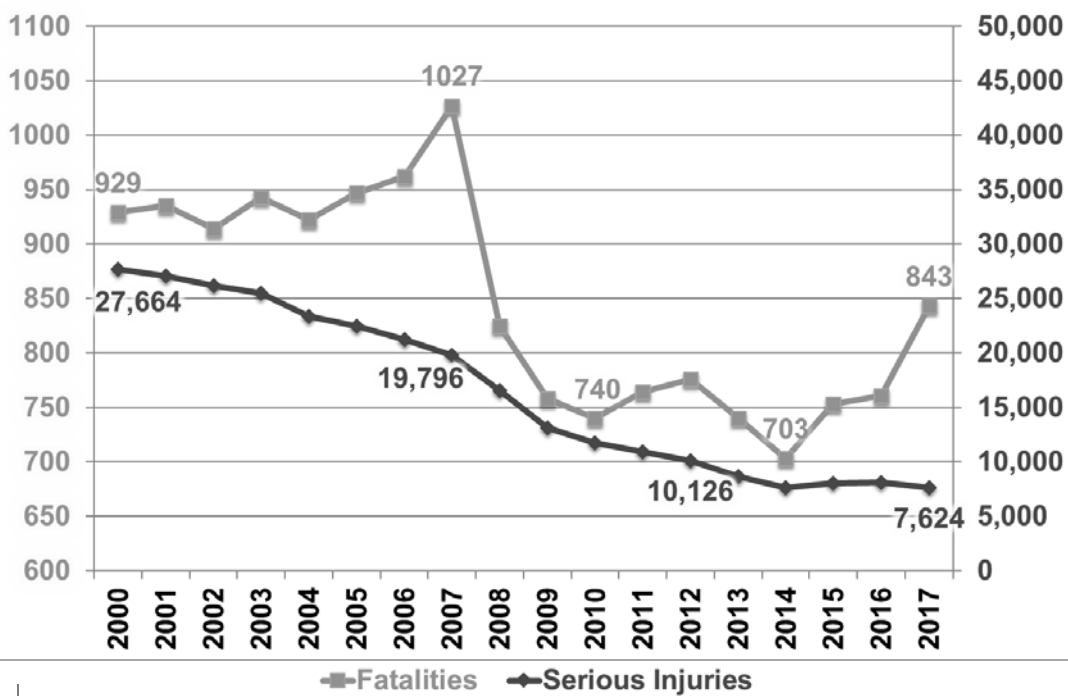
| Stephen W. Read, P.E.

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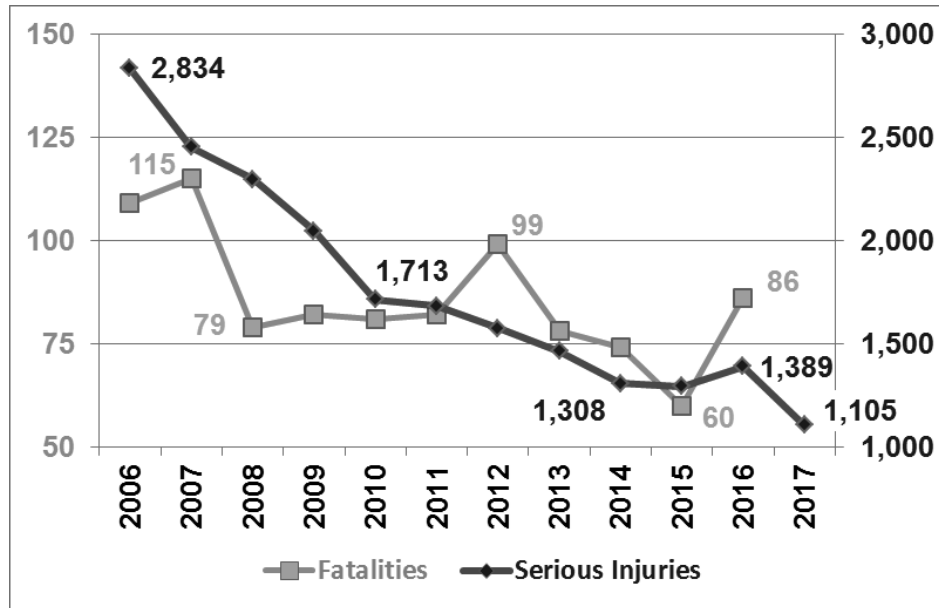
Outline

1. Severe Crash Trends and Factors in Virginia
2. Virginia's Safety Programs and Initiatives
3. SMART SCALE Prioritization Safety Considerations

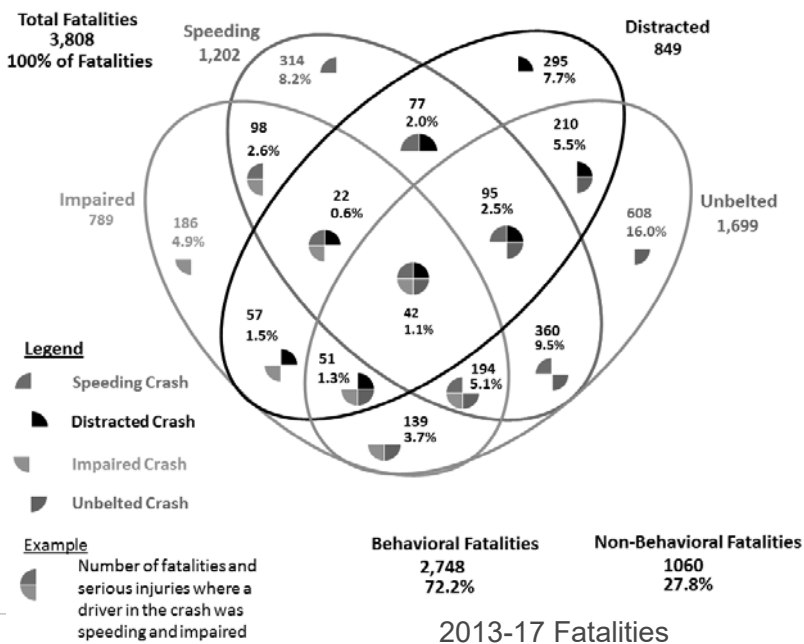
Virginia Severe Crash Outcomes



Northern Virginia Severe Crash Outcomes



Critical User Behaviors in over 70% of Fatalities



Improving user behaviors remains crucial to reducing severe crashes and their outcome.

Virginia's Safety Stakeholders

Virginia's Highway Safety Implementation

2017-21 Strategic Highway Safety Plan contains Countermeasures and Actions for:

- Pedestrians and Bicyclists
- Intersections / Interchanges
- Roadway Departures
- Young Drivers
- Impaired Drivers
- Speeding
- Unbelted Occupants
- Incident Response and Management
- Connected & Automated Vehicles

VDOT Highway Safety Improvement Program:

- Safety targeted and cost effective infrastructure treatments

DMV Highway Safety Plan:

- Behavioral educational and enforcement activities

OIPI SMART SCALE:

- Multi-modal infrastructure and operational improvements

Safety Improvement Funding



\$20M Statewide

\$2M in NoVA



\$48M VDOT Statewide
\$12M Local Statewide

\$6.5 - 7.5M on NoVA VDOT
\$1.4 - 2M on NoVA Local



2 years funding

\$390M High Priority Program
\$390M District Grants Program

\$varies NoVA High Priority
\$88M NoVA District Grants

HSIP Focus Areas



Welcome to SMART Portal



Applications About



Applications About



Applications About



Applications About

Spot & Corridor Highway Safety

- Identify high crash locations each year based on last 5 years crash and traffic data
- Focus on largest severe crash reductions per dollar spent
- Project types:
 - Turn lanes
 - Upgrading Traffic Signals
 - Roundabouts
 - Paving shoulders, adding rumble strips and guardrail
 - Bike lanes, sidewalks, multi-use trails

Systemic Highway Improvements

Roadway Departures:

- Curve warning signs
- Better lane markings
- Rumble Strips
- High Friction Pavement

Intersections:

- Advance warning
- Reflective Backplates
- Flashing Yellow Arrow Signal
- LED Signals

Pedestrians and Bicyclists:

- Warning and crossing signing
- Crosswalk marking
- Ped Signals
- Flashing Beacons

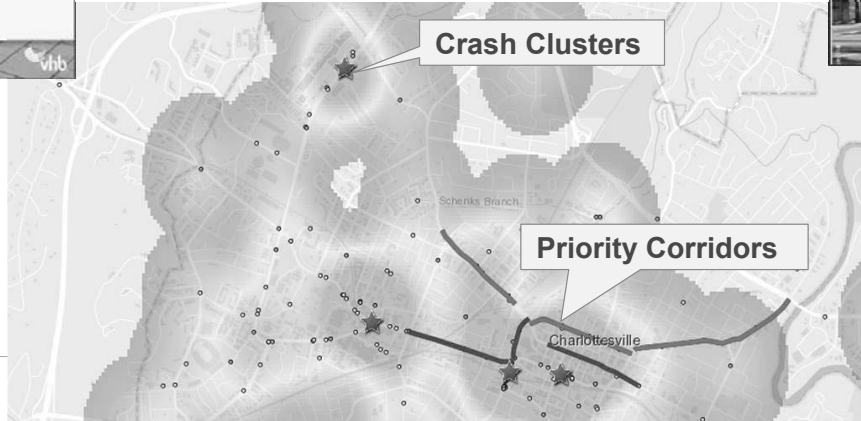
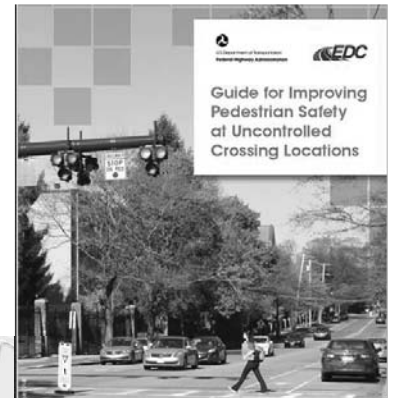
Low cost devices spread across the network

Systemic Pedestrian Treatments



Identify target crash type and/or countermeasure with factors / environment contributing to risk

Prioritize corridors based on mix of crashes and factors



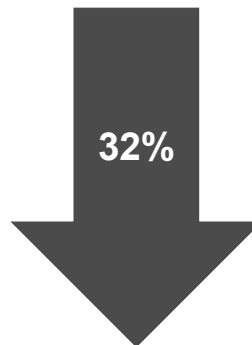
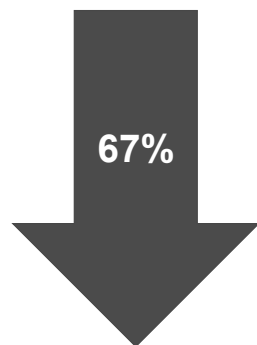
Funded \$1.6M projects in NoVA from \$8M for 2019 deployment

Before-And-After Results: Targeted Crashes

Where 318 highway safety-funded projects have been deployed since 2004, Targeted Crashes have changed as follows:

Fatal Crashes

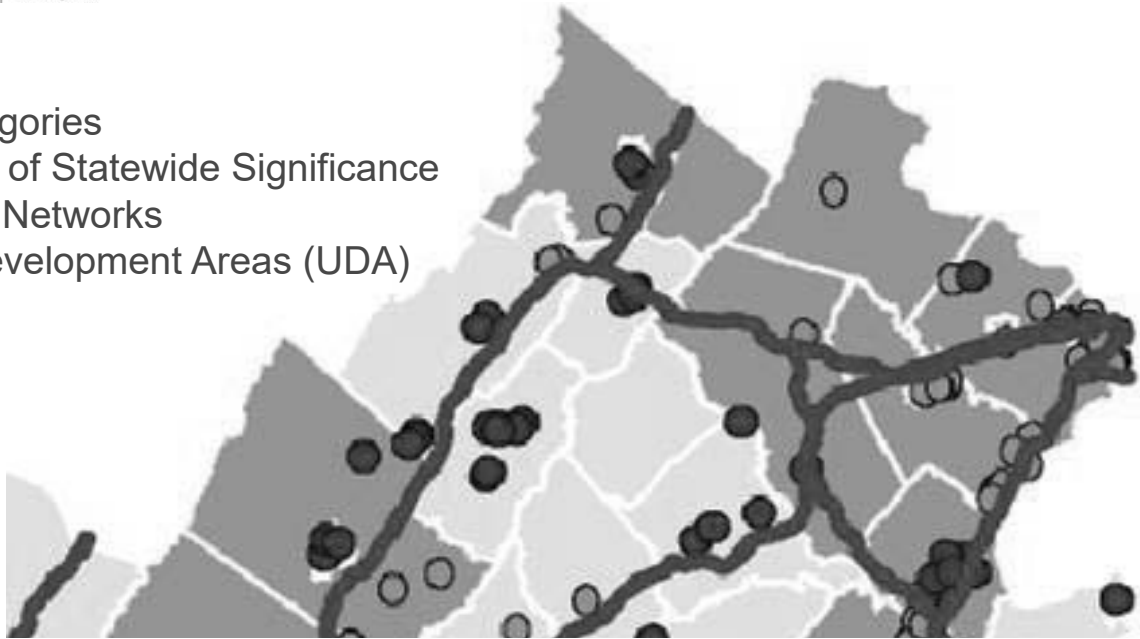
Injury Crashes



VTrans - Needs Assessment

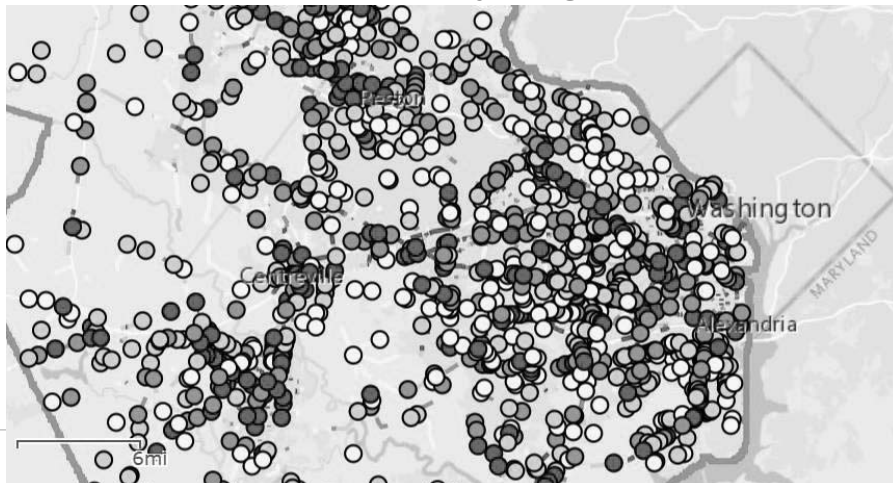
4 Need Categories

- Corridors of Statewide Significance
- Regional Networks
- Urban Development Areas (UDA)
- Safety



SAFETY Needs

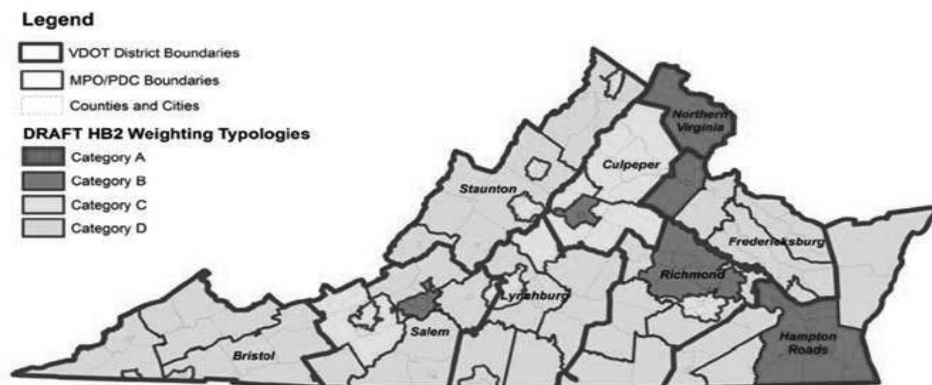
- Safety needs based on Potential for Safety Improvement (PSI) intersections and segments identified in each VDOT district, or
- Safety assessment of crash history or geometric deficiencies.



SAFETY Benefits

- Benefits determined from published **crash reductions** for Roadway improvements or **changes in VMT (build/no-build)** for Transit/TDM and New Alignment benefits
- Maximize expected reductions by:
 - **minimizing** user **conflicts** with innovative intersections, interchanges and driveway management
 - providing **more “forgiving”** roadways with **non-motorized accommodations**

Area Type Weighting



Factors >	Safety	Congestion Mitigation	Accessibility	Land Use	Environmental Quality	Economic Development
Category A (NoVA)	5%	45%	15%	20%	10%	5%

Virginia's Highway Safety Resources

Towards Zero Deaths: www.tzdva.org

Arrive Alive SHSP: www.virginiadot.org/info/hwysafetyplan.asp

VDOT HSIP: www.virginiadot.org/business/tes_app_pro.asp

SMART SCALE: <http://vasmartscale.org/>

DMV Safety Programs: www.dmv.virginia.gov/safety/#grants/index.asp

DOE Driver Education:

www.doe.virginia.gov/instruction/driver_education/index.shtml

VDH EMS:

www.vdh.virginia.gov/emergency-medical-services/

VDFirePrograms:

www.vafire.com/

VA Statewide Traffic Incident Management:

<http://vastim.org/>

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